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Le guide pédagogique est destiné aux professeurs du primaire et plus particulièrement aux spécialistes en éducation physique. Il présente des suggestions et des modèles destinés à faciliter la mise sur pied du programme d'éducation physique et à aider les professeurs qui tentent de développer une approche éducative centrée sur l'enfant. Le premier chapitre rappelle les orientations et l'approche éducative sur lesquelles le guide est basé. Le deuxième chapitre traite des différents types de planification des cours en éducation physique. Le troisième chapitre aborde le processus de l'apprentissage et de l'enseignement. Le chapitre quatrième indique la manière de faire l'évaluation de l'apprentissage et le dernier chapitre suggère diverses méthodes que les professeurs peuvent utiliser pour évaluer systématiquement l'efficacité de leur enseignement, en comparant les résultats qu'ils prévoyaient avec ceux qu'ils ont réellement atteint.

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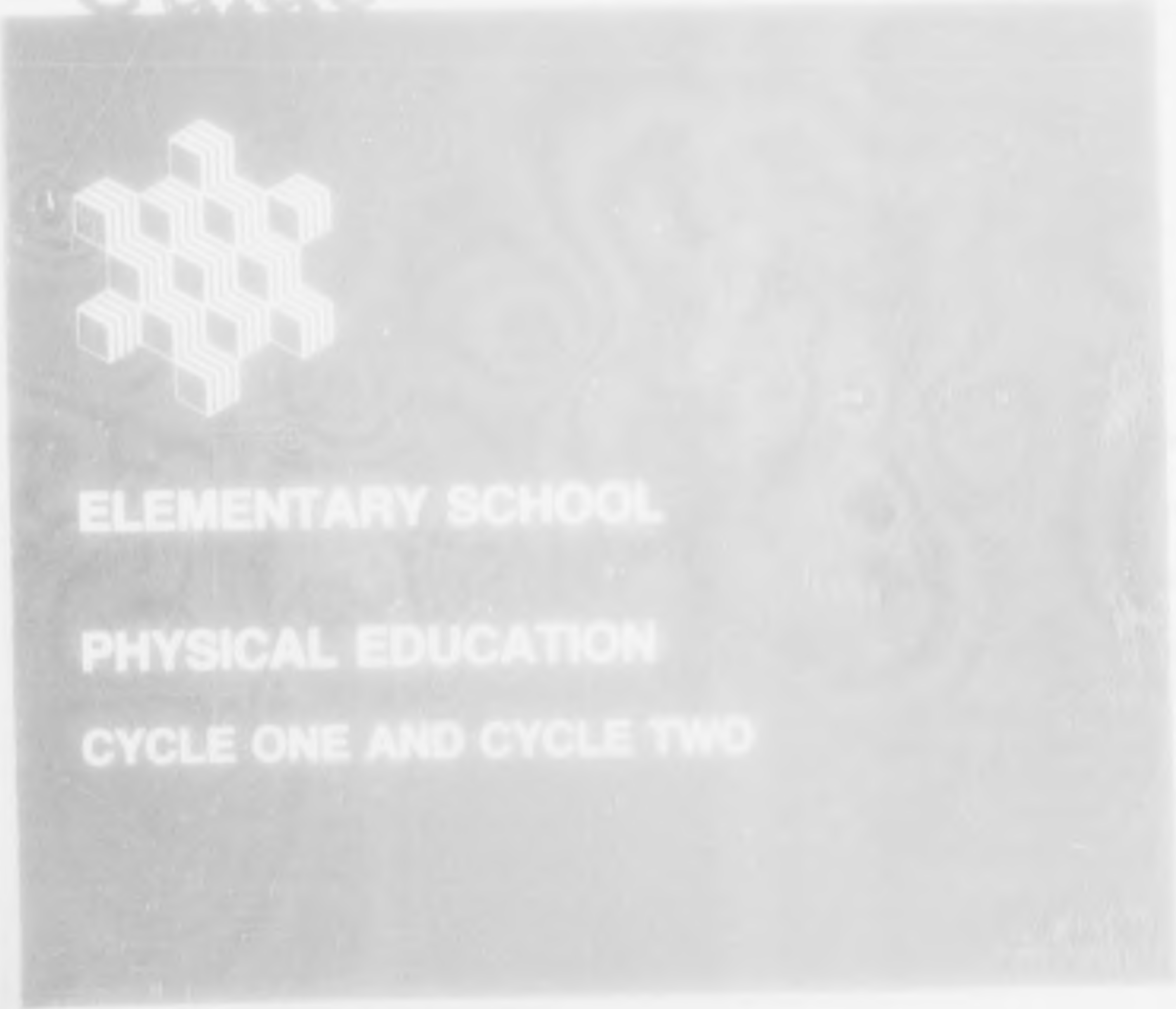
# Curriculum Guide



## ELEMENTARY SCHOOL

## PHYSICAL EDUCATION

## CYCLE ONE AND CYCLE TWO

Québec

EDUQ 8770864

# Curriculum Guide

## ELEMENTARY SCHOOL

## PHYSICAL EDUCATION
CYCLE ONE AND CYCLE TWO

**Direction générale des programmes**
Direction de la formation générale

The proposals contained in this guide need to be put to the test in daily practice. They should be tried out, analyzed, taken apart, rethought, and reworked, for it is only through trial and revision that the instructional approach for physical education will be developed and improved. This interplay between theory and practice will make it possible to derive an instructional model and to introduce educational innovations.

Developed by Gilbert Gagnon, coordinator of physical education programs, in cooperation with Pierre Bussière, Bertrand Hould, and Pierre Mathieu, educational development officers. The translation was done by Kay Flanagan with the assistance of other members of the Educational Development in the English Language translation team, ministère de l'Éducation.

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The traditional masculine forms of speech are used throughout this document; however, BOTH genders should be understood.

# INTRODUCTION

## INTRODUCTION

### 0.1 Outline of the Curriculum Guide

This curriculum guide, which accompanies the elementary Physical Education program, is intended for all teachers and in particular, for specialists in physical education. The suggestions and models contained in it are designed to facilitate implementation of the program in keeping with its underlying philosophy and to give support to teachers who are trying to develop a pupil-oriented approach in their teaching. The guide also attempts to show that the concept of child-centred learning is compatible with teaching practices based on systematic organization, implementation, and evaluation of learning activities. It suggests ways in which teachers can organize their activities, respect the individuality of their pupils and, at the same time, cover the minimum objectives prescribed in the program to ensure pupils' development.

The guide presents a situational learning approach which comprises three steps: planning and preparation, implementation, and evaluation. The objective in following this approach is to ensure the best possible results for pupils. The guide stresses the fact that teaching should focus on the individual development of all elementary pupils rather than concentrate exclusively on the learning content per se, and suggests that this should be accomplished as unobtrusively as possible.

## 0.2 Relationship Between the Program and the Curriculum Guide

A program, as defined by the ministère de l'Éducation, is an official document which comprises a set of clearly defined, compulsory learning objectives that specify what is to be covered in terms of pupils' learning and development.

The Physical Education program is divided into three parts. The first part outlines the general orientations for the program and defines the goals to be pursued. The second part analyzes movement, a generic term which encompasses all the different components of the learning content. From this the themes and the learning objectives for the program are derived. The third part covers the educational evaluation process to be used and sheds new light on methods of integrating evaluation into the teaching/learning process.

The curriculum guide is a teaching tool that offers a variety of instructional innovations aimed at helping teachers to influence pupils in a positive way.

It is aimed more particularly at the following question:

- How does one ensure that the educational goals of the program are met and that the anticipated development of pupils during the learning process takes place.

This guide is composed of different chapters which define the role of the teacher during the three different times in the instructional process. Table I summarizes the interrelated components of this type of curriculum guide.

The aim of both the program and the guide is to improve the quality of learning by focusing on the relationship between the pupil and the educational environment.

**TABLE I** The Curriculum Guide and Its Component Parts

| TIMES | Before Teaching | | During the Interaction | After Teaching | |
|---|---|---|---|---|---|
| CHAPTERS | I<br>The basic principles of instruction | II<br>The teaching plan | III<br>The unfolding of the teaching process | IV<br>Evaluation of learning | V<br>Review of teaching |
| PHASES → | Consideration | Decision | Application | Review | |
| | Catalyst | Organizer | Facilitator | Evaluator of the teaching product and process | |
| | ↓ | ↓ | ↓ | ↓ | |
| Role of the teacher → | Chooses his teaching strategies | Plans and organizes his teaching | Teaches and evaluates pupil learning | Analyzes and evaluates the effect of his actions | |
| | | Teaching = | continual instructional | experimentation | |

## 0.3 Underlying Principles of the Curriculum Guide

It is hoped that this guide will encourage teachers to adopt a comprehensive approach to physical education and to see it as an important means whereby the intellectual, emotional, and physical attributes of each pupil may be developed in a comprehensive manner.

There are a number of premises on which this guide has been developed. Those which have the greatest impact on the teaching activities and which therefore are considered to be most important are:

- The pupil has the main responsibility for his own learning.
- The pupil is an individual with his own personal qualities and his own learning rhythm.
- The pupil develops skills at different times and through different experiences that are appropriate for him.
- Respect for the pupil does not mean that he should not be directed or helped.
- The pupil should undergo experiences designed to improve his capacity to act, to apply different thought processes, and to develop certain values.

  The pupil should be considered as a complete person in whom all the component parts work together to enable him to become an increasingly autonomous, well balanced, and responsible member of society.
- The pupil should be encouraged to make decisions, to make rational choices, and to develop skills and habits, in keeping with his own needs and interests, so as to be able to pursue recreational activities of his own choosing after he leaves school.
- Physical education should help the pupil to develop his personal qualities, his talents, his knowledge, his skills, his view of the world and of life, his feelings about himself, and his attitude toward others.

## 0.4 Purpose of the Curriculum Guide

The guide should not be viewed as a recipe book or catalogue, or a list of instructions to follow and pitfalls to avoid, but rather as a reference book. It presents a coherent procedure which teachers can adapt to suit their own needs. The instructional model has been worked out, tested, and proven effective in pilot projects. In spite of this, the guide does not pretend to have produced a definitive way of teaching physical education. There remains much work to be done in finding ways to improve the quality of learning in this discipline.

By analogy, the guide can be compared to a motor that is capable of setting the theoretical aspect of the program in motion, a vehicle for transporting the theory to the class, so as to ensure viable interaction between the teacher -- the pupil -- the environment -- the learning content.

The material contained in this guide should generate ideas around which teachers can plan their programs, evaluate their approach, propose new strategies, hold discussions with colleagues, and, in this way, encourage instructional innovation in physical education. The elements contained in this guide should not be considered as separate entities, but rather as a part of a comprehensive system.

This document is a tool for all teachers who wish to develop their teaching practice within an ongoing, experimental framework. If teaching is to be an evolving process, and not a standardized practice, it must be continually modified on the basis of day-to-day experience. Ideally, the teacher should be conducting an instructional experiment each time he sets up a learning situation in which pupils pursue an activity according to predetermined conditions and for a specific purpose.

## 0.5 Content of the Curriculum Guide

The guide has been divided into three sections which cover the three steps of the teaching process: preparation of activities, implementation, and assessment of the implementation of the program. This sequence makes it possible to describe the teacher's and the pupil's roles in the activities and to identify the main responsibilities they will share.

The introduction to the guide outlines the goals and the underlying philosophy of the guide, shows its relationship to the program, and discusses its relevance and its content.

Chapter One reviews the orientations and the teaching/learning approach on which the program and the guide are based. Particular attention is paid to the teaching/learning process, which is of great importance in the program and is the framework within which the learning conditions are organized. This chapter ends with a theoretical model of a learning sequence.

Chapter Two covers the different types of instructional planning. It suggests a flexible method for initiating different planning procedures and discusses particular points that the teacher should consider when preparing his teaching strategies.

Chapter Three covers the teaching/learning process. It describes the teacher's and the pupil's roles during the different phases of the teaching/learning process within the learning sequence. Subsequently it touches on the principal skills which a teacher should have to make the most productive use of learning time and to create a positive class environment.

Chapter Four shows how evaluation is carried out within the framework of the learning sequence. It identifies the elements that should be taken into account during the planning, development, and application phases of the evaluation process. The chapter ends with the presentation of observation instruments that are particularly appropriate for physical education.

Chapter Five suggests ways in which teachers can systematically assess the effectiveness of their teaching by comparing the results that were anticipated with those actually achieved.

The guide is accompanied by an appendix that introduces domains for different subjects of study. They should be considered as proposals designed to help teachers to further specify the terminal objectives or subjects of study.

# CHAPTER I

## 1.0 BASIC PRINCIPLES OF INSTRUCTION

## CHAPTER I

## 1.0 BASIC PRINCIPLES OF INSTRUCTION

### 1.1. The Teaching/Learning Orientation

The Physical Education program's basic tenet is that the pupil should be the focus of the teaching concerns of all the physical education teachers in the school. The guide is designed to bridge the gap between the content of the program and its practical application, and to help teachers orient their strategies towards the all-round development of the pupil. The teacher's strategies should take into account the fact that pupils are continually seeking to improve their competence in the skills they need in order to adapt to and change their environment. In turn, this interaction with their environment brings about changes in the pupils.

In this perspective, the pupil should be regarded as an autonomous and creative person, responsible for his own development and that of others. He is an active agent within the group and, as such, should take the responsibility for organizing his own learning experiences, setting the rhythm of his own progress, choosing his partners, and determining the resources he needs to further his own development.

The teacher should be a source of support, one who seeks to create the best possible learning environment for his pupils. He should pay particular attention to establishing a good psychological climate in the class and to satisfying the needs and interests of each pupil. The teacher should individualize his teaching, treating each pupil as an individual within the group and helping him to progress through a variety of meaningful learning experiences backed up by a dynamic learning environment. In this way, the teacher dominated classroom situation will be avoided. Teachers should give pupils some freedom in choosing the activities they wish to pursue, while encouraging each one to develop his own unique qualities and his potential for improving his skills.

The specific nature of the activities pursued and the different ways in which they may be approached, provide ample opportunities for the teacher to cover the educational objectives. The Physical Education program may, then, be defined as a special and unique experience which gives each pupil an opportunity, regardless of his level of capability, to learn and to experience freely, using all his mental and physical resources to solve problems as they arise.

The different chapters in this guide are based on this orientation.

### 1.2 The Teaching/Learning Approach

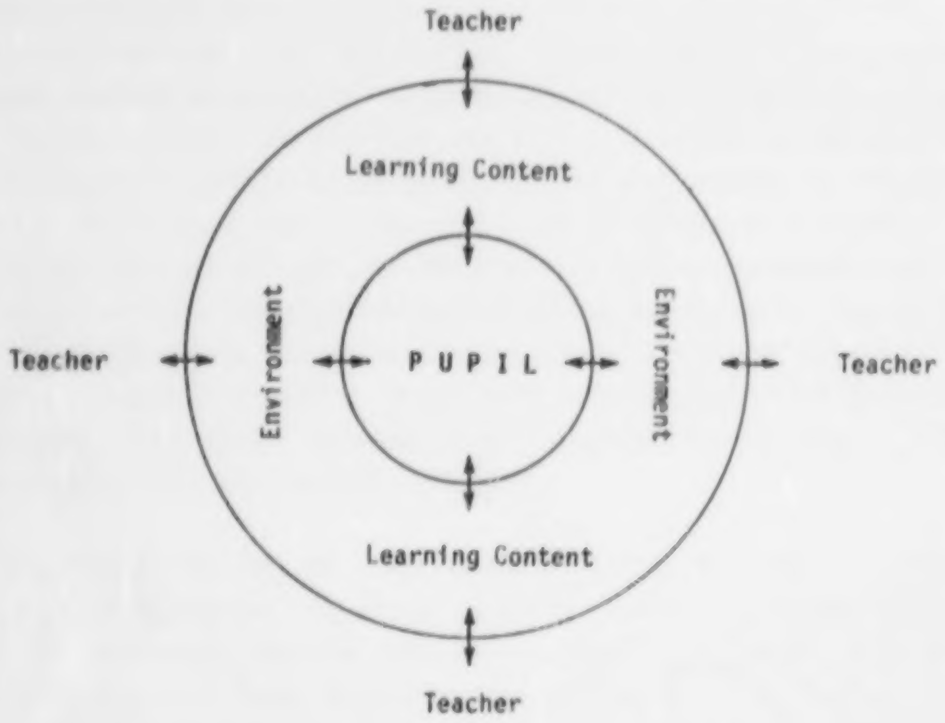
An orientation centred on human values and concerns and designed to foster the all-round development of pupils requires a teaching-learning approach that focuses on the pupil as the motivating force in his own education. Such an approach is characterized by a commitment to respect the potential of each individual and to encourage the pupil to become responsible for his own development and that of his classmates, through the interaction he has with others, the environment, and the learning content.

This focus on the pupil's role is not intended to imply a completely free approach centred exclusively on the child. It does not mean that the teacher should adopt a non-directive and permissive position which, would be counter to the interests of a society which holds its schools accountable for the contribution they make to the education of its children. The purpose of using the approach described here is to maintain a balance between the extremes of overly teacher-oriented teaching and overly pupil-oriented teaching. By reducing the teacher's dominance so that pupils can participate actively in their own learning, it is possible to adopt a comprehensive approach which allows each of the components of teaching to interact with the others and thereby to achieve the educational aims of the school. These components -- the pupil, teacher, learning content, and the environment -- are all of equal importance and no one of them should be neglected in favour of another. The most important interaction should take place between the pupil and the environment. The teacher, with the help of his pupils, should choose the environment that is most appropriate for achieving and integrating the learning objectives and that is most stimulating and meaningful to the pupils themselves.

The teacher should observe, analyze, and evaluate this four-way interaction throughout the program so that he can modify his stategies to achieve the best possible results.

## TABLE 2

## The Components of Teaching and Their Respective Contributions


Teacher
Learning Content
Teacher
Environment
PUPIL
Environment
Teacher
Learning Content
Teacher

The pupil is the focus of the educational process.

The pupil, the environment, and the learning content interact constantly

The teacher organizes the environment to create a learning situation.

The teacher observes, analyzes, evaluates, and modifies the interaction of "pupil-environment-learning content."

These premises served as the frame of reference for developing an approach to the teaching/learning process in physical education consonant with the orientations of the program.

## 1.3 The Teaching/Learning Process

The teaching/learning process is based on the idea that learning and teaching, while closely related, are distinct processes. Learning is the process the pupil undergoes, a process in which he progressively changes as he is guided through a set of experiences. When the pupil is placed in a situation which requires him to interact with his physical and social environment and which presents him with new and challenging problems to solve, he is able to develop and to learn new skills. Teaching consists of the activities organized by the teacher to foster his pupil's development within given time and material limitations. The teacher provides pupils with the educational environment they need to achieve the learning objectives.

In this process, the way in which the pupil's and the teacher's roles are viewed is very important. The child should be seen as a gifted person who has learned a great deal outside the school setting and whose abilities are evidence of past experience which he brings to the learning process. He can be inventive in finding his own solutions to problems. He can take the initiative when given the opportunity to do so. He can be motivated to actively seek solutions to his problems if he is presented with interesting challenges within his capabilities. The teacher's role is to stimulate the pupil's own desire to improve. The teacher cannot do the learning for the pupil: his role is to provide an environment conducive to the development of new behaviours that are in keeping with the learning objectives.

He should also help the pupil determine the cause of any difficulties he may have and enable him to progress by suggesting new ways in which he can improve. The teacher should evaluate pupils' progress continuously or at regular intervals, as well as at the end of a learning sequence, so that he can keep track of what they have learned.

The teaching and the learning involved in the teaching/learning process can each be broken down into three phases. While it is convenient here to divide these processes into phases, it should be borne in mind that in practice they take place at the same time.

## The Teaching/Learning Process From the Standpoint of Learning

The process is examined here from the point of view of the phases the pupil goes through in assessing a situation, taking action, and integrating the results with his past experience.

### PHASE I

| | |
|---|---|
| Approach to the situation | The pupil, in approaching the situation, calls upon his present ability and past experience. If the situation is sufficiently interesting, meaningful, and feasible to give him the necessary motivation and if it corresponds to his own aims, he will want to find solutions to the problem posed. |

Each situation presents different problems or challenges which the pupil must interpret on the basis of the skills and knowledge he has acquired through past experience. His interpretation of the situation determines the action he would like to take and if this action matches the goal of the task, he will have both the intrinsic and extrinsic motivation to act. Although the pupil does not always have enough experience to solve each problem spontaneously, he will make an attempt to achieve goals which seem realistic and interesting to him.

## PHASE II

| | |
|---|---|
| In action | The pupil draws on past experience, the knowledge he has acquired, and the resources at his disposal, to solve the problem posed by the situation. |

At this stage, the pupil uses different types of thought processes to explore the situation, to organize information, to apply appropriate solutions, and to evaluate his choices in order to internalize what he has learned so that he can apply this new knowledge in other situations.

He uses his imagination to make an inventory of all the possible solutions. This approach to the problem allows for diversity and spontaneity and also gives rise to a variety of ideas and original responses that should either help him to discover how to go about solving the problem, or make him reconsider the steps he has already taken. The results of this broad exploration will help him come up with new information and new solutions to the problem. It is through his ability to think conceptually that he is able to structure the thoughts he has produced in a somewhat random fashion. The pupil needs to clarify the situation by putting the information he possesses in order and by reviewing his perception of the problem. In this way, the pupil establishes his own way of doing things by keeping what is acceptable to him, by rejecting what is irrelevant, and sometimes by putting ideas aside for the time being.

His ability to evaluate helps him to choose one of a number of possible solutions. By comparing possibilities, he selects those which correspond most closely to the learning objective. His ability to see the practical implications of his solutions will lead him to make generalizations for future application in other situations.

## PHASE III

**Learning from the experience**

The pupil takes stock of what he has learned, he identifies the skills and knowledge that need additional work, and he discovers different ways to apply the experience he has gained in new situations.

The learning experiences enable the pupil to acquire knowledge and to develop skills. In the process, changes take place in him, and these changes are observable before they become integrated into his fund of skills. If the experience is to be integrated so that he can progress, it must be reinforced in increasingly complex situations so that it becomes a part of him, and so that he can apply what he has learned in different ways and to other situations in the environment.

## The Teaching/Learning Process From the Standpoint of Teaching

The teacher should adapt his strategies to meet the requirements of the teaching/learning process. This involves playing the appropriate role for each phase.

### PHASE I

### Approach to the situation

**The teacher acts as a catalyst.**

> He chooses situations on the basis of predetermined learning objectives or particular problems that arise in class.

For this phase the teacher should choose activities that will encourage pupil involvement. He should establish a learning context in which pupils are given concrete problems adapted to their individual levels of competence. The activities selected should be in keeping with the experience and concerns of the child and designed to elicit a positive response from pupils toward the task to be carried out. The teacher will be able to achieve this if he can call upon different strategies designed to involve and motivate the child by appealing to their imagination and by choosing the type of activities they like to pursue.

### PHASE II

### In action

**The teacher acts as a facilitator.**

> He provides the pupil with the best possible means to learn, gives him feedback on his performance, and helps him to accomplish his task.

This is one of the most demanding parts of the teaching process. The following are some of the more important techniques for teachers to use. They should:

- ask questions designed to enable pupils to discover the principles that will help them to solve problems themselves, rather than give them readymade solutions to problems;
- make up instructions which place as much importance on the process as on the result;
- use techniques to foster cooperation among pupils in carrying out tasks;
- encourage pupils to discuss the problems in order to explore several possible solutions, instead of looking for only one;
- identify problems and difficulties and provide information that is either too difficult or too complex for pupils to discover for themselves;
- encourage pupils to come up with original responses and solutions.
- ...

## PHASE III

## Learning from the experience

**The teacher acts as an integrator.**

He identifies, or helps the pupil to identify what has been learned, or what requires additional work, and encourages the pupil to apply his newly learned skills in other activities.

The teacher should encourage the pupil to identify what he has discovered, achieved, or perfected during the activity, and to assess what he has learned and what he still needs to work on.

As a result of this assessment, decisions will be made to modify the program to meet learning needs. The teacher can involve pupils in the making of these decisions. This is the moment when the learning experience will be assimilated if it is meaningful to pupils and if it relates to their previous experience.

The teaching/learning process as described from the pupil's and the teacher's point of view is summarized in Table 3.

TABLE 3

The Teaching/Learning Process

| | | |
|---|---|---|
| **The pupil,** in approaching the situation, calls upon his present ability and past experience. If the situation is sufficiently interesting, meaningful, and feasible to give him the necessary motivation and if it corresponds to his own aims, he will want to find solutions to the problems posed. | Approach to the situation | **The teacher acts as a catalyst.**<br>He chooses situations on the basis of predetermined learning objectives or particular problems that arise in class. |
| **The pupil** draws on past experience, the knowledge he has acquired, and the resources at his disposal, to solve the problem posed by the situation. | In action | **The teacher acts as a facilitator.**<br>He provides the pupil with the best possible means to learn, gives him feedback on his performance, and helps him to accomplish the task. |
| **The pupil** takes stock of what he has learned, he identifies the skills and knowledge that need additional work, and he discovers different ways to apply the experience he has gained in new situations. | Learning from the experience | **The teacher acts as an integrator.**<br>He identifies, or helps the pupil to identify what has been learned, or what requires additional work, and he encourages the pupil to apply his newly learned skills in other activities. |

## 1.4 The Learning Sequence

A learning sequence is an intensive period of educational activity that can be divided into three separate phases. It provides the necessary context for developing a given skill. The sequence is presented here as a theoretical model for organizing a set of conditions so as to maximize the opportunities for learning to take place within the framework of the teaching/learning process. The sequential phases each have their own characteristics and purposes. Phases 1 and 3 are evaluations, one at the beginning of the sequence and one at the end. Phase 2 is devoted to learning per se and can be subdivided into three types of learning situations:

Type 1: A learning situation in which the aim is to have pupils acquire the knowledge or skills prerequisite to the attainment of the learning objective, or to have pupils discover the concepts, principles, or laws governing the skill to be developed.

The objective is to help the pupil to become aware of different problems and to solve them in his own personal way. The experience should be designed to facilitate solution of the problems posed.

Type 2: A learning situtation in which the aim is to have pupils acquire certain conditioned skill responses, improve certain skills or techniques, and integrate these with their previous experience.

The pupil repeats a number of drills until they become automatic. He will be able to put into practice the knowledge and skills learned in the first type of situation, providing the conditions are similar.

Type 3: A learning situation in which the aim is to have pupils transfer their skills to different contexts, so that they can discover new concepts or patterns of actions related to the skill in question.

The pupil is placed in different or more complex situations which involve other environmental components. For example, if the subject of study is "projecting for accuracy," the objects, tools, and body parts used may be varied. Partners or opponents may be added. The learning situation should be structured to enable pupils to transfer their skills to new contexts for the purpose of consolidating what they have learned.

The duration of each type of learning situation will vary according to the level of the pupil's experience. The teacher may spend more time on the discovery of the principles or rules governing a skill if this is what is needed to motivate the pupil to improve this skill in new situations. Alternatively, he may concentrate on the development of conditioned responses, provided that appropriate situations for transfer of skills can be set up within regular courses or elsewhere.

The three types of learning situations make up the core of the learning sequence. However, the sequence would not be complete, and the measurement of the changes effected would not be possible, without the inclusion of two evaluation situations, one at the beginning of the sequence and one at the end. The initial evaluation has a threefold purpose. It allows the teacher to assess the pupil's development in a given skill area, to make sure he has the necessary prerequisites to learn a new skill and to identify needs that may arise from the program planned for the pupil. This evaluation is considered a learning situation because it is effected by means of learning tasks.

The final evaluation situation is presented to pupils at the end of a given number of lessons that comprise the learning sequence. It gives teachers an opportunity to assess what their pupils have learned during the sequence. The information collected may be made available to pupils, parents, and school principals.

The aim of the learning sequence is to ensure continuing and cumulative learning. Each learning situation should be directed towards the acquisition of a set of skills and at the same time, should prepare pupils for more complex learning activities. The subjects of study should be interrelated so that pupils can gradually improve and broaden their range of skills.

To sum up, a learning sequence is a learning unit in which pupils study one or more skills through a variety of activities for the purpose of developing new skills leading to the terminal objective in question.

Table 4 on the following page illustrates the learning sequence.

# TABLE 4

## Learning Sequence

| | Phase 1 | Phase 2 | | | Phase 3 |
|---|---|---|---|---|---|
| | Initial Evaluation | Type 1 Situation | Type 2 Situation | Type 3 Situation | Final Evaluation |
| Nature of the evaluations and the learning situations | The pupil is given standardized evaluation tasks related to the skill that is to be developed. The purpose of this is: | The pupil is given a task related to the learning objective, to enable him: | The pupil is given a number of similar, repetitive tasks, to enable him: | The pupil is given a more complex task similar to those he has already completed, to enable him: | The pupil is given the same evaluation tasks used in the initial evaluation. The purpose of this is: |
| Purpose of the evaluations and the learning situations | . to assess the pupil's competence in terms of the learning objective selected for the sequence.<br>. to ensure that the pupil has the prerequisites to learn the new skill.<br>. to bring to light any needs with regard to the learning content of the program. | . to acquire prerequisite entry skills and knowledge.<br>. to discover the concepts, principles, or laws governing the skill. | . to develop the necessary conditioned responses to master the skill.<br>. to improve the techniques he uses to perform this skill.<br>. to assimilate certain concepts and automatic responses. | . to transfer skills and knowledge to other activities and contexts.<br>. to discover new concepts or sequences of action related to the skill in question. | - to assess the pupil's competence at the end of the time spent learning a skill so as to determine the degree of learning that took place. |

The learning sequence and the teaching/learning process are combined in Table 5 to show one possible approach that teachers may use.

TABLE 5

The Teaching/Learning Process and the Learning Sequence

| Learning Situation / Teaching/ Learning Process | Phase 1 | Phase 2 | | | Phase 3 |
|---|---|---|---|---|---|
| | Initial Evaluation | Type 1 Situation | Type 2 Situation | Type 3 Situation | Final Evaluation |
| **First Phase**<br>The pupil approaches the situation.<br>The teacher acts as a catalyst. | The pupil is given standardized evaluation tasks related to the skill that is to be developed. The purpose of this is:<br>. to assess the pupil's development in terms of the learning objective selected for the sequence. | The problem presented serves as a stimulus. It can be practical and concrete, or an imaginary course of action. The purpose of the problem is to enable the pupil: | | | The pupil is given the same evaluation tasks used in the initial evaluation. The purpose of this is:<br>. to assess the pupil's development at the end of the time spent learning a skill so as to determine the degree of learning that took place. |
| **Second Phase**<br>The pupil in action.<br>The teacher acts as a facilitator. | . to ensure that the pupil has the prerequisites for learning the new skill.<br>. to bring to light any needs with regard to the learning content of the program. | . to acquire prerequisite entry skills and knowledge.<br>. to discover the concepts, principles, or laws governing the skill. | . to develop the necessary conditioned responses to master the skill.<br>. to improve the techniques he uses to perform this skill.<br>. to assimilate certain concepts and automatic responses. | . to transfer skills and knowledge to other activities and contexts.<br>. to discover new concepts or sequences of action related to the skill in question. | |
| **Third Phase**<br>The pupil learns from the experience.<br>The teacher acts as an integrator. | | The skills and knowledge learned should be applied to different tasks of the same level of difficulty, or to ones that are of increasing complexity, to enable the pupil: | | | |
| | | . to become familiar with his newly learned skills and knowledge. | . to apply them in other activities to extend their application. | . to transfer them to other situations and keep them up through practice. | |

# CHAPTER 2

## 2.0 PLANNING THE PHYSICAL EDUCATION PROGRAM

## CHAPTER 2

## 2.0 PLANNING THE PHYSICAL EDUCATION PROGRAM

The new Physical Education program for elementary schools needs to be adapted for use in the school. This chapter shows how to establish a flexible planning procedure which takes into consideration the particular conditions in each school.

### 2.1 Levels of Planning

The first level of general planning has been completed by the ministère de l'Éducation which was responsible for developing the program that comprises the general and terminal objectives for both cycles of elementary school. The program includes the percentage of teaching time that should be devoted to each of the program's themes and to the learning objectives.

The second level of planning is the responsibility of school boards in charge of implementing the program. The school board calls upon its teachers, educational consultants, and others involved in physical education to organize the overall administrative planning for the schools. This overall plan should take into account the human and physical resources of the school board, and, at the same time, comply with the official Physical Education program.

The third level of planning is carried out in the school. The physical education teachers, working with the head of the department and others in the field, should develop courses adapted to their own needs and the organizational restrictions, time allotments, and the limitations of the physical facilities in their school. Needless to say, the school's program must fit in with the overall administrative plan of its school board.

The fourth level of planning is the responsibility of the teacher. It is he who organizes the learning units and the physical education lessons within the school program.

Table 6 illustrates the different levels of planning.

TABLE 6

**Levels of Planning and Planning Responsibilities**

| **Levels of Planning** | **Planning Responsibilities** |
|---|---|
| 1. MEQ<br>Developers of the program | Physical Education program |
| 2. School Board<br>- Physical education teachers<br>- Educational consultants<br>- Other persons having responsibility in the area | Administrative planning |
| 3. School<br>- Teacher | Learning Sequence |
| - Teacher | Plan for the physical education period |

To facilitate planning at all levels, it is a good idea to have teachers make an inventory of the resources available to them. The following table should help them in this task.

TABLE 7

**Inventory of Resources**

| **Resources** | **Questions** |
|---|---|
| 1. HUMAN | - Are my colleagues able to assist me?<br>- Is there an educational consultant or head of department available?<br>- Can he assist me?<br>- Are there people in the school who could assist with some of the physical education lessons?<br>- Do I need to take in-service courses? |
| 2. MATERIAL | - What type of equipment is available to me?<br>- Is the quantity and the condition of this equipment satisfactory?<br>- Is the equipment readily accessible to pupils? |
| 3. PHYSICAL | - What kind of playing areas are there within the school grounds or in the neighbourhood of the school?<br>- Have the necessary arrangements been made to use outside facilities?<br>- At what times are these outside facilities available?<br>- How can I make optimum use of the geographic and climatic conditions in my area? |
| 4. FINANCIAL | - What portion of their global envelope does the school board allocate to physical education?<br>- What grants are available for professional improvement? |

## 2.2 Elements of the Planning Procedure

Planning a program involves making up objectives, establishing the means to achieve them, and determining an evaluation procedure.

These three elements are found at all planning levels. In planning each element, it is important to look at what has been done in the previous step in order to avoid duplication of work and to ensure continuity and coherence in the sequence of elements.

### 2.2.1 Content and Learning Objectives
(First Element)

To facilitate the planning of the content and learning objectives, the objectives should be linked to the movement contexts, the general objectives to the themes, and the terminal objectives to the subjects of study. For the purposes of this guide, learning objectives and content are synonymous and the use of either term should be understood to denote both. This choice of approach will enable teachers to base their planning on either the learning objectives or the content.

The program constitutes the first level of planning. It contains the general objectives for all the years of elementary school and the terminal objectives for each cycle. Further planning is required to distribute these objectives between the cycles and then between the years. This may be done in a series of steps:

#### Step I

#### Establishing a Planning Procedure for the Learning Objectives

The planning procedure starts with the most general and progresses to the most specific, examining, in order, the movement contexts, the themes, and the subjects of study.

The movement contexts are all covered in each year of elementary school under one or more themes.

There are three ways the themes may be distributed.

1. All the themes may be covered each year.
2. The themes may be distributed among the years of the cycles and each covered only once.
3. The themes may be distributed among the years of the cycles and some of them covered more than once.

The distribution of the subjects of study is based on the distribution of the themes. Decisions made at this time may be modified later if necessary.

Ways in which the learning objectives may be distributed are shown in Table 8.

## TABLE 8

### Alternative Ways of Distributing Learning Objectives

| Movement Contexts<br>↑<br>Purposes | Themes<br>↑<br>General Objectives | Subjects of Study<br>↑<br>Terminal Objectives |
|---|---|---|
| All covered each year under one or more themes | 1. All covered each year | 1 ◄<br>A. All covered each year<br>B. Distributed among the years of the cycle, each covered only once<br>C. Distributed among the years of the cycle, some covered more than once |
| | 2. Distributed among the years of the cycle, each covered only once. | 2 ◄<br>A. All covered for each of the themes chosen for the year |
| | 3. Distributed among the years of the cycle, some covered more than once | 3 ◄<br>. For the themes covered only once:<br>A. All covered each year<br>. For the themes of which some are covered more than once:<br>B. All covered each year<br>C. Distributed among the years of the cycle, each covered only once<br>D. Distributed among the years of the cycle, some covered more than once |

Step 2

## Determining the Amount of Time To Be Allotted to the Learning Objectives

This step involves setting an approximate time to be devoted to each level of objectives. The time allotment can be determined by going from the most general to the most specific, as before. It should, however, be noted that this time allotment, which will be divided into class periods, is not the amount of time to be devoted to achieving an objective, but rather the time required to complete the learning activities.

The following are examples of this process.

EXAMPLE I

**Suggested Time Allotment for Movement Contexts**

| **Movement Contexts**<br>Cycles | Category 1<br>**Personal Enviroment** | Category 2<br>**Physical Environment** | Category 3<br>**Social Environment** |
|---|---|---|---|
| Cycle 1 | ± 15% | ± 45% | ± 40% |
| Cycle 2 | ± 20% | ± 35% | ± 45% |

## EXAMPLE 2

### Suggested Time Allotment for the Themes

| THEMES | CYCLE 1 | CYCLE 2 |
|---|---|---|
| 1. Mobility | ± 15% | ± 10% |
| 2. Physical Exertion | ± 0% | ± 10% |
| 3. Locomotion | ± 20% | ± 15% |
| 4. Object Manipulation | ± 25% | ± 15% |
| 5. Cooperation | ± 10% | ± 10% |
| 6. Opposition | ± 10% | ± 10% |
| 7. Cooperation and Opposition | ± 10% | ± 20% |
| 8. Expression | ± 10% | ± 10% |

The following example gives the suggested time allotment for the subjects of study based on the terminal objectives.

EXAMPLE 3

**Suggested Time Allotment for the Subjects of Study**

| Themes<br>General Objectives | Subjects of Study<br>Terminal Objectives | Cycle 1 + or - | Cycle 2 + or - |
|---|---|---|---|
| 1. MOBILITY | | 15% | 10% |
| Actions linked with | Movements of body parts | 3% | - |
| | Body positions | 5% | 5% |
| | Use of space | | |
| | Time required | 7% | 5% |
| | Demands for energy | | |
| 2. PHYSICAL EXERTION | | 0% | 10% |
| | Cardiorespiratory stamina | - | |
| | Muscular endurance | - | 10% |
| 3. LOCOMOTION | | 20% | 15% |
| Locomotor movement | In relation to various kinds of space | 10% | 7% |
| | In relation to various types of objects | 10% | 8% |
| 4. OBJECT MANIPULATION | | 25% | 15% |
| | Handling objects | 5% | |
| | Projecting objects | 10% | 15% |
| | Receiving objects | 10% | |
| 5. COOPERATION | | 10% | 10% |
| | Cooperation | 5% | 5% |
| | Synchronization | 5% | 5% |
| 6. OPPOSITION | | 10% | 10% |
| | Individual offensive actions | 5% | 5% |
| | Individual defensive actions | 5% | 5% |
| 7. COOPERATION & OPPOSITION | | 10% | 20% |
| | Exploitation of the playing space | 5% | |
| | Offensive strategies | 5% | 10% |
| | Defensive strategies | - | 10% |
| 8. EXPRESSION | | 10% | 10% |
| | Expression of ideas & feelings | 5% | 10% |
| | Representation of events | 5% | - |
| | TOTAL | 100% | 100% |

The percentages listed for the different subjects of study can, by extrapolation, be used for each level of a cycle. However, before establishing them as permanent, it is advisable to complete the 1st operation. The result of this work applied to certain themes and subjects of study could take the form shown in the fourth example.

EXAMPLE 4

## Suggested Time Allotment for the Subjects of Study

(By Level)

| Themes<br>General Objectives | Subjects of Study<br>Terminal Objectives | Cycle 1 | | | Cycle 2 | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| 1. MOBILITY | | 15% | 15% | 15% | 10% | 10% | 10% |
| Actions linked with | Movements of body parts | 3% | - | - | - | - | - |
| | Body positions | 5% | 5% | 5% | 5% | 5% | 5% |
| | Use of space | | | | | | |
| | Time required | 7% | 7% | 7% | 7% | 7% | 7% |
| | Demands for energy | | | | | - | - |
| 2. | | | | | | | |
| | | | | | | | |
| 3. | | | | | | | |
| | | | | | | | |
| 4. MANIPULATION | | 25% | 25% | 25% | 15% | 15% | 15% |
| | Handling objects | 5% | 5% | 5% | 5% | - | - |
| | Projecting objects | 10% | 10% | - | - | - | - |
| | Receiving objects | 10% | 10% | - | - | - | - |
| | Receiving & projecting objects | | | 20% | 10% | 15% | 15% |
| 5. | | | | | | | |
| | | | | | | | |
| 6. OPPOSITION | | | | | | | |
| | Individual offensive actions | - | - | 5% | 5% | 5% | - |
| | Individual defensive actions | - | - | 5% | 5% | 5% | - |
| 7. | | | | | | | |
| | | | | | | | |
| 8. | | | | | | | |
| | | | | | | | |
| | TOTAL | | | | | | |

The content or objectives of this exercise can aid in the selection of the principle information used in drawing up the annual teaching schedule or in planning learning sequences. For each of the themes the teacher can also complete a form similar to the one which follows.

## EXAMPLE 5
## PLANNING FORM

**Content**

| | Cycle 1 | | |
|---|---|---|---|
| | 1° | 2° | 3° |
| Movement Context | | | |
| Theme | | | |
| Subject of Study | | | |
| Dimension | | | |
| Dimension | | | |
| Dimension | | | |
| Dimension | | | |
| Subject of Study | | | |
| Dimension | | | |
| | | | |

**Objectives:**

| | 1° | 2° | 3° |
|---|---|---|---|
| Goal | | | |
| General Objective | | | |
| Terminal Objectives | | | |
| Operational Objectives | | | |
| or | | | |
| Intermediate Objectives | | | |
| " " | | | |
| " " | | | |
| " " | | | |
| Terminal Objective | | | |
| " " | | | |
| " " | | | |
| " " | | | |

**Step 3**

**Setting up the Teaching Schedule for the Year**

This involves selecting the themes and subjects of study to be covered and deciding when they should be taught and the number of periods to be devoted to each. The following is a sample schedule for the first year of elementary school.

EXAMPLE 6

## SCHEDULE FOR THE FIRST YEAR OF ELEMENTARY SCHOOL

| TERMS | NUMBER OF PERIODS | THEMES | SUBJECTS OF STUDY | DIMENSIONS | MATERIALS |
|---|---|---|---|---|---|
| 1 | 18P | Mobility 10P | Movements of body parts 2P<br>Body positions 3P<br>Actions linked with the use of space time required demands for energy 5P | | |
| | | Locomotion 8P | Movement in relation to different objects 8P | | |
| 2 | 16P | Locomotion 6P | Movement in relation to various kinds of space 6P | | |
| | | Object Manipulation 8P | Manipulation 4P<br>Projection 4P | 1-2-3-4<br>1-2-9-10 | |
| 3 | 20P | Object Manipulation 10P | Projecting 2P<br>Receiving 8P<br>Assisting in the action of another 5P | | |
| | | Cooperation 8P | Synchronization 3P | | |
| 4 | 16P | Cooperation and Opposition 7P | Use of playing space 5P<br>Variation of roles 2P | | |
| | | Expression 7P | Representation of facts and events 5P<br>Expression of ideas and feelings 2P | | |

Step 4

## Specifying Operational Objectives

It is necessary to develop the operational objectives in such a way that the teacher can evaluate them, put them into practice, and relate them to other objectives. The terminal objectives are too general to be taught directly and therefore, for teaching purposes, they must be broken down into operational objectives. First the domain (position of the person who is projecting, types of projection, characteristics of the object projected, etc.) is specified for either the subject of study or the terminal objective. When the domain has been established, the next step is to select and organize the dimensions of the domain which then become operational objectives.

Two processes for specifying domains, one for subjects of study and one for terminal objectives, are described here.

Process 1

The example used here to illustrate the process of specifying domains for subjects of study is "projecting for distance": F.4.3 "To propel a variety of objects in different ways with or without the use of implements".[1]

---

1. Québec, Ministère de l'Éducation, Elementary School Curriculum, Physical Education. No. 16-3018A, p.50.

There are a number of environmental variables that can be identified in connection with projecting for distance. Some of these are:

| | | | |
|---|---|---|---|
| A. | Position of the person who is projecting | A1 | Stationary |
| | | A2 | Moving |
| B. | Types of projection | B1 | With a tool |
| | | B2 | Without a tool |
| C. | Characteristics of the object projected | C1 | Held or intercepted |
| | | C2 | Moving |

By developing a matrix of variables for projecting for distance, the domain for this subject of study can be determined, as follows:

EXAMPLE 7

**Domain for Projecting for Distance**

| | | C 1<br>Held or Intercepted Object | C 2<br>Moving Object |
|---|---|---|---|
| A1<br>Person Projecting | B1<br>Without a tool | 1 | 2 |
| Stationary | B2<br>With a tool | 3 | 4 |
| A2<br>Person Projecting | B1<br>Without a tool | 5 | 6 |
| Moving | B2<br>With a tool | 7 | 8 |

The domain is composed of a number of dimensions. In this example there are 8 possible combinations, each of which can constitute a specific objective.

| Dimensions | Operational Objectives |
|---|---|
| 1. A1 B1 C1 | Oper. Obj. P.4.1.1 |
| 2. A1 B1 C2 | Oper. Obj. P.4.1.2 |
| 3. A1 B2 C1 | Oper. Obj. P.4.1.3 |
| 4. A1 B2 C2 | Oper. Obj. P.4.1.4 |
| 5. A2 B1 C1 | Oper. Obj. P.4.1.5 |
| 6. A2 B1 C2 | Oper. Obj. P.4.1.6 |
| 7. A2 B2 C1 | Oper. Obj. P.4.1.7 |
| 8. A2 B2 C2 | Oper. Obj. P.4.1.8 |

The first operational objective can be written as follows: To project as far as possible, from a stationary position, an object intercepted or held by one body part.

The teacher can select the most suitable dimensions for developing projecting skills at the different levels. He should plan a set of tasks which are built around the dimensions in question.

Process 2

The example used here to illustrate the process of making up operational objectives by developing the different parts of the statement of the terminal objective is F.3.2.

Theme → General Objective

↓

Locomotion → "The pupil should be able to control different forms of locomotor movement under a variety of environmental conditions."[2]

↓

Subject of Study    Terminal Objective

↓

Locomotor movement in relation to various kinds of space (ground, air).    F.3.2 "To move safely using various pieces of equipment on somewhat uneven terrain."[3]

**To move safely**

A. Locomotor movements

A1 to ski
A2 to skate
A3 to snowshoe
A4 ...

**Using various pieces of equipment**

B. Equipment

B1 cross country skis
B2 alpine skis
B3 snowshoes
B4 skates
B5 ...

**On terrain**

C. Surface

ground
snow
ice

---

2. Québec, Ministère de l'Éducation, Elementary School Curriculum, Physical Education. No.16-3018A, p.43.

3. ibid.

**That is somewhat uneven**

| | |
|---|---|
| D. Slopes | gentle slope<br>average slope<br>steep slope |
| E. Obstacles | fixed obstacles<br>moving obstacles |

For the combination of variables indicated in A, B, C, etc., it is possible to determine a number of operational objectives which cover a broad variety of tasks. One of these objectives could be: "To cross-country ski on gentle slopes which have a few fixed obstacles."

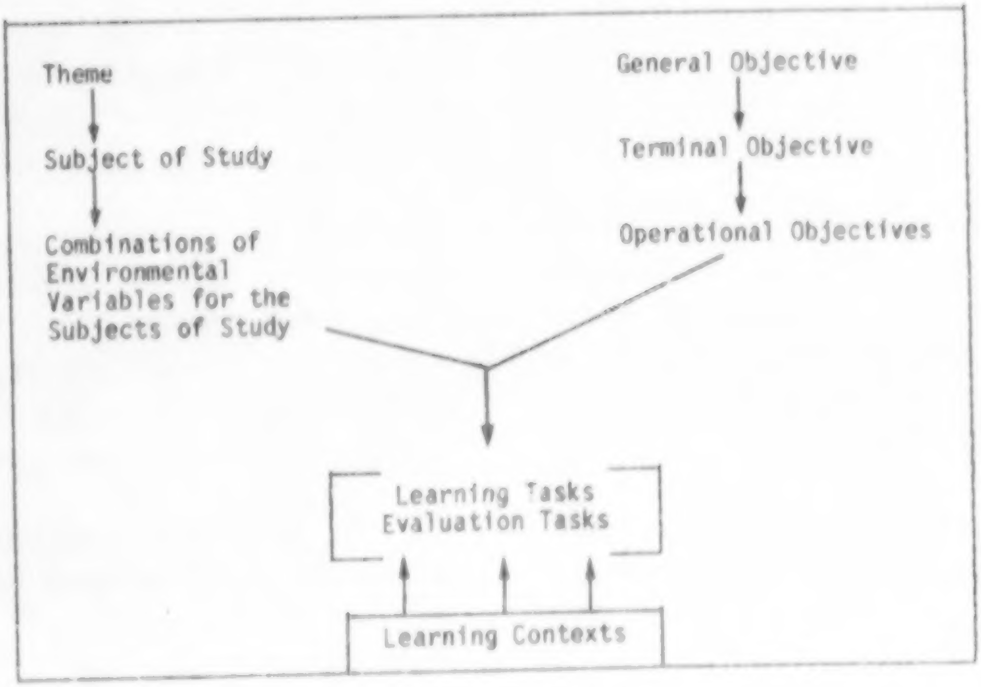
Teachers may choose dimensions from the domains of the subjects of study or terminal objectives as a basis for teaching pupils the skills covered in the program. They might, for example, choose to teach projecting for distance by using dimensions 3-6 at a given elementary school level and put together a set of tasks in learning contexts which will enable pupils to develop the appropriate skills.

The terminal objectives may be broken down into operational objectives by using one of the processes described above, as shown in the following table.

The terminal objectives may be broken down into operational objectives by using one of the processes described above, as shown in the following table.

## TABLE 9

**Steps in Developing Operational Objectives**


Theme
Subject of Study
Combinations of Environmental Variables for the Subjects of Study
General Objective
Terminal Objective
Operational Objectives
Learning Tasks
Evaluation Tasks
Learning Contexts

Appendix 1 presents domains for some of the subjects of study in the program to help teachers become familiar with this new way of developing operational objectives. Teacher participation in furthering the work begun here should help to provide the best possible learning contexts for skill development.

### 2.2.2 **Means of Implementation**

(Second Element)

Once the teaching schedule has been established and operational objectives have been formulated, the next step is to specify the means of implementation to be used in pursuing the terminal and general objectives and achieving the educational goals.

When teachers select physical education activities they usually choose established sports, games, creative movement activities, and conditioning exercises. The new program provides a list of suggested activities under the general heading "means of implementation." In this guide, the term "means of implementation" is used to denote more than just the activities - it comprises all the necessary means to support the teaching/learning approach underlying the program.

The means of implementation include all the factors which the teacher uses to create a learning situation centred on the pupil and designed to foster his personal development. These factors comprise activities, strategies, procedures, instructions, and instructional materials.

The selection, development, and organization of the means of implementation should follow certain principles of learning. These are listed in the program under "Factors in the Learning Process." Other criteria for selecting or organizing learning situations are outlined below.

- "The nature and organization of learning experiences should be calculated to encourage the learner to inquire, to do his own thinking, to develop his own ways of working out problems, and to try out his own ideas. Faced with the temptation to provide the answers and solutions, the teacher must grant the learner the right to come to grips with the learning process, even though the products may be less refined than the teacher would wish.

- It is imperative that pupils learn in multiple ways. They need to learn from books, from observation, from analysis, and from discussion. Presumably there is also an optimal way of learning for each individual. Since we know little about diagnosing individual optimal ways of learning, it is desirable to provide for a wide range of learning experiences so no individual is deprived either of his own possible way of learning or of his best way of learning.

> . If each learning experience is open-ended in the sense that it not only permits but also encourages responses and activities that differ in depth, in the content of the response, and in the way of thinking, the true freedom and flexibility of the curriculum becomes apparent."[4]

The criteria, principles, and definitions of the means of implementation outlined above are very general. Consequently a selection has been made of those which correlate most closely with the concept of teaching and learning on which the program is based.

## First Means of Implementation

### Learning Situation

In selecting specific means of implementation at any given planning level, the first priority is to decide on the type of learning situations that should be presented to pupils. The learning situation is in itself a means of implementation and a determinant factor in the selection of other means and, as such, needs to be defined.

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4. TABA, Hilda. Teachers' Handbook for Elementary Social Studies. Addison-Wesley, 1967.

The learning situation is the framework in which the child is placed in order to learn. It should, therefore, comprise all the elements which make up the environment in which the teacher will initiate the process of change in the pupil. There are three types of situations:

- ones in which the aim is to have the pupil learn about the principles or the factors that govern a skill;
- ones in which the aim is to have the pupil develop conditioned skill responses;
- ones in which the aim is to have the pupil transfer previously acquired learning and skills to more complex situations.

## Second Means of Implementation

## Learning Contexts

The second means is the learning context in which interaction will take place. It is the various combinations of environmental variables, or operational objectives, which make up the learning context. There are three types of learning contexts:

- contexts worked out and presented by pupils following instructions given by the teacher;
- contexts worked out and presented solely by the teacher;
- contexts dictated by known rules or standards.

## Third Means of Implementation

### Teaching Strategies

Teaching strategies are processes designed to encourage pupils to become involved in their own development.

A number of suggested teaching strategies taken from a paper by Gilles Noiseux are described here.[5]

| | |
|---|---|
| **DEMONSTRATION** | Learning a behaviour by copying a good demonstration. |
| **PROBLEM SOLVING** | Giving a problem that calls for personal involvement on the part of the pupil to solve it. |
| **GAMES** | Organized activities of an enjoyable nature, based on sets of rules. |
| **EXERCISES** | Drills for practising specific skills. |
| **TASKS OR PROJECTS** | Doing specific work towards achievement of a learning objective. |

Other strategies may be added to this list, but for the purposes of this guide, only those most familiar to teachers have been selected.

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5. Noiseux, Gilles, Modèle et comportement de résolution de problème selon le traitement de l'intervention. May 1980, Revised Oct. 1981. Unpublished paper.

Fourth Means

## Procedures

In this context, procedures comprise the formation of groups or teams, the use of equipment, the grouping of pupils, safety measures, and any other element involved in class organization.

Fifth Means

## Instructions

It is through verbal or written instructions that the teacher tells his pupils how to carry out the activities. These should be designed to elicit personal and well thought-out responses from pupils, rather than purely mechanical ones.

Sixth Means

## Instructional Materials

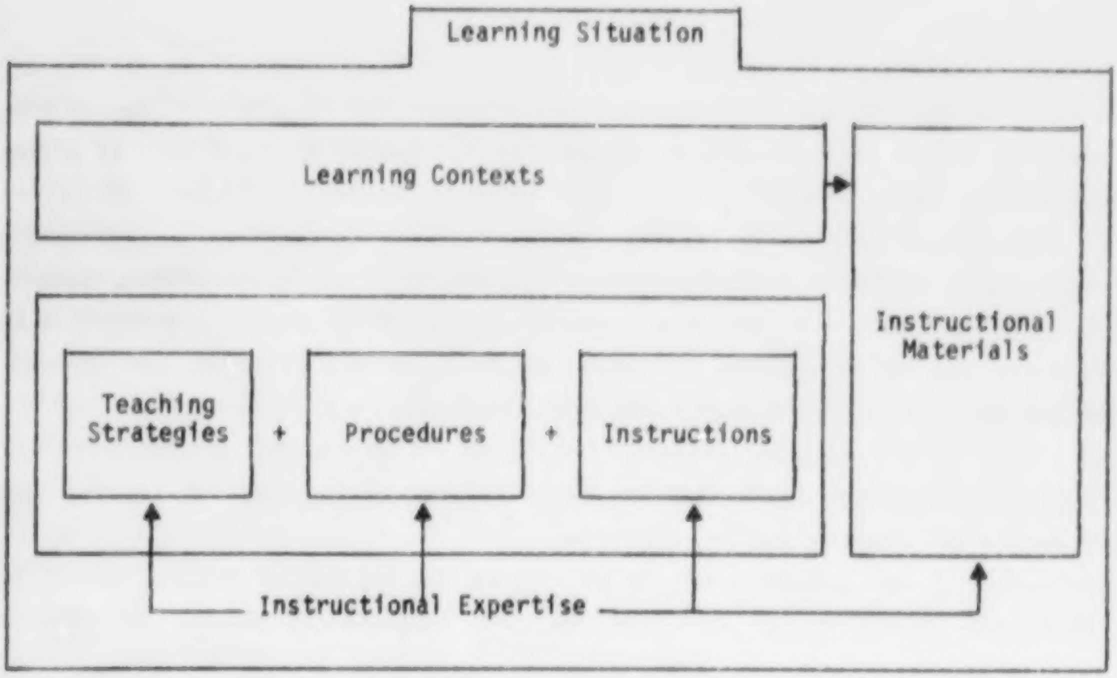
These comprise the resource materials used in implementing activities: instruction sheets, progress reports, drawings illustrating the activity, or any other such material used by the teacher.

How well the teacher uses these materials will depend upon his level of understanding and this, in turn, is determined by his values, training, and previous experience.

Table 10 presents, in sequential order, the means of implementation that may be used to make up a learning sequence or an individual lesson.

## TABLE 10

### Means of Implementation


Learning Situation
Learning Contexts
Instructional Materials
Teaching Strategies
+
Procedures
+
Instructions
Instructional Expertise

### 2.2.3 Evaluation Process

(Third Element)

When planning has been completed at all levels, the teacher is then ready to put the plans into effect.

It is quite likely that there will be a discrepancy between the planned objectives and the actual learning. To keep this to a minimum, the teacher needs to be able to evaluate learning so that he can assess the results in the light of what was anticipated. Following the evaluation, decisions can be made and follow-up action taken. This is what is generally termed evaluation. In this guide the term "evaluation process" is used to stress the continuing nature of this operation.

In planning the evaluation process, there are a number of questions which the people in the educational milieu responsible for the different levels of planning should answer.

Two premises should be stated before this subject is examined. First, educational evaluation is an integral part of the teaching/learning process, and its basic aim is to improve decisions about a pupil's learning and general development and to facilitate his future progress.

Secondly, educational evaluation should be adapted to the learning experiences defined in the program and not the reverse.

The following questions should help in planning the evaluation procedure.

## First Question

Why and when should the evaluation process take place?

Normally evaluation is carried out three times:

- before the teaching,
- during the interaction between teacher and pupils,
- after the teaching.

The length of a teaching sequence may vary. It can involve one or several lessons, or even extend over more than a term or year.

As to why evaluation should be made, the answer depends on the situation in question. If evaluation is carried out before or at the beginning of a sequence, its purpose is to assess the pupil's abilities in terms of prerequisite skills for the objective to be pursued.

If the evaluation is carried out during the sequence, its purpose may be either to enable the teacher to modify his teaching strategy, or to enable the pupil to modify the way he learns in order to make more satisfactory progress.

If the evaluation is carried out at the end of the sequence, its purpose is to enable the teacher to reassess the teaching plan, or to inform the pupil, parents, and the school about the pupil's progress.

Table 11 summarizes the main purposes of evaluation in the three phases of the learning sequence.

## TABLE 11

## PURPOSES OF EVALUATION IN THE THREE PHASES OF THE LEARNING SEQUENCE

| **When To Evaluate** | **Types of Decision** (Purpose of Evaluation) |
|---|---|
| BEFORE the teaching | - to assess the pupil's abilities in terms of prerequisite skills for the objective to be pursued,<br>- to modify the means of implementation. |
| DURING the interaction | - to modify the ways in which the pupil learns,<br>- to modify the teacher's strategies. |
| AFTER the teaching | - to furnish information to parents and the school administration,<br>- to modify the teaching plan. |

## Second Question

### What should be evaluated?

In physical education, evaluation should cover the content of the program, which is essentially the study of movement performed in different contexts and for specific purposes. It should also cover those elements of content which are prerequisite or implied, but not necessarily specified, such as the rules which govern the way an activity is carried out. The prerequisite content includes certain skills or knowledge needed to be able to perform a given movement.

Regardless of what is being evaluated, the procedure should be expressed in the form of objectively observable indicators, which may be either qualitative or quantitative.

Thus, in evaluating "projecting for accuracy" the following criteria may be used:

Quantitative Indicator

- number of times the target is reached

Qualitative Indicators

- eye kept on the target
- good grip of the object
- follow-through of the projecting limb toward the target
- ...

Evaluation can also be made of the degree of mastery of a motor skill after a given number of class periods. The evaluation criterion for this is the difference between the raw score of the final test compared to that of the same test administered at the beginning of the unit. The raw score can be either qualitative or quantitative, or both.

## Third Question

### How is the evaluation procedure carried out?

This final question raises a number of other questions.

(a) What measurement instruments, tools, or means should be used to collect information?

The means should be chosen for their validity in measuring the skills in question. They should also be practical to use.

(b) Should the information obtained be recorded, and if so, how and by whom?

In the case of tests involving observation of performances of motor tasks, the method for recording the results and the persons who will be recording them must be determined.

If direct observation is used, the pupil himself, a classmate, the teacher, or an outside observer can record the observations.

(c) How should the information be processed?

The information should be analyzed per se (formative evaluation) or compared to previous results or anticipated results (formative or summative evaluation). It is on the basis of these analyses that the teacher should make his judgements.

(d) What kinds of decisions will be made and what action will be taken on the basis of this information?

It is a good idea to identify the types of decisions that will be made and actions that will be taken, always keeping in mind the goal being pursued.

Table 12 gives a summary of the questions to be asked in planning the evaluation process.

## TABLE 12

### Questions Used in Planning the Evaluation Process

| THE EVALUATION PROCESS | | | |
|---|---|---|---|
| **WHY?** | **WHEN?** | **WHAT?** | **HOW?** |
| Purpose of evaluation<br>- to modify the scope and content of teaching strategies<br>- to inform those who are interested<br>- to advise the pupil about his progress. | Selecting the times when evaluation will take place. | Selecting what is to be evaluated. | Selecting the ways and means of evaluating<br>- measurement instruments<br>- method of recording information<br>- method of processing the information obtained or instructions on how to evaluate. |

Chapter Four gives more detailed information on these questions. It explains and gives examples to assist the teacher in planning the evaluation process for the learning sequence. Teachers will find a concrete illustration of the evaluation process applied to a learning sequence in the Formative Evaluation Guide (16-7220-03A) which accompanies the program and in this curriculum guide.

### 2.2.4 Planning the Learning Sequence
(Fourth Element)

When the teacher has selected, planned, and specified the content, chosen and worked out the means of implementation, and planned the evaluation process, he is ready to take all this information and arrange it in logical and sequential order. He will then be in a position to draw up a plan for the learning sequence and individual physical education periods.

The learning sequence should be planned around the subject of study or the corresponding terminal objective. The plan should include the dimensions of the domain of the subject of study and the operational objectives that have been selected to be taught for a number of periods in the learning sequence. It should also specify the time of the year it is to be taught, where it will take place, and the length of time it will take. The means of implementation and of evaluation for the objective being pursued should also be indicated.

The teachers in a school board or in a school can get together to plan the learning sequences. To help them in this task, a model learning sequence, giving the principal elements that should be included in the plan, is shown on the next page.

EXAMPLE 8

**Sample Learning Sequence (No. )**

| | |
|---|---|
| Content | |
| Theme | Purpose |
| Subject of Study | Terminal Objective |
| Dimensions of the Domain | Operational Objectives |

Date ☐

Term ☐

Duration ☐

Groups ☐

| **Means of Implementation** | | |
|---|---|---|
| **Summative Evaluation** | | |
| Lesson<br>I | Initial Evaluation | Procedures<br>Instructions<br>Materials |
| **Formative Evaluation** | | |
| Lesson<br>II | Learning Situation<br>Learning Context<br>Teaching Strategies | Procedures<br>Instructions<br>Materials |
| Lesson<br>III | Learning Situation<br>Learning Context<br>Teaching Strategies | Procedures<br>Instructions<br>Materials |
| **Summative Evaluation** | | |
| Lesson<br>IV | Final Evaluation<br>Evaluation Tasks | Instructions<br>Materials |

| **Evaluation Process** | | | |
|---|---|---|---|
| | Why? | What? | How? |
| Before | | | |
| | Why? | What? | How? |
| During | | | |
| | | | |
| | Why? | What? | How? |
| After | | | |

## Plan for the Physical Education Period

Teachers should refer to the elements of the model learning sequence when making up detailed plans for physical education periods. The framework for these plans should be the three phases of the teaching/learning process outlined in this guide. The procedures, instructions, and teaching strategy for each phase should be indicated. The following sample plan shows how this may be done.

## EXAMPLE 9

### Sample Plan for a Physical Education Period

| | Teaching/ Learning Process | Learning Context | Evaluation Procedure | | | |
|---|---|---|---|---|---|---|
| | | | Focus of Evaluation | Measurement | Evaluation | Decision/ Action |
| | | | | Means Used Information Collected | Analysis or Interpretation | Modification |
| Theme<br>Subject of Study<br>Terminal Objective | The pupil approaches the situation | "This involves all the elements that comprise the lesson: learning tasks, procedures, instructions, strategies, and instructional materials." | | | | |
| Dimensions of the Domain Covered: | The pupil in action | | | | | |
| Date | The pupil learns from the experience | | | | | |

## CHAPTER 3

## 3.0 THE TEACHING/LEARNING PROCESS

## CHAPTER 3

## 3.0 THE TEACHING/LEARNING PROCESS

In this chapter the roles of the teacher and of the pupil in physical education classes are detailed. The definition of these roles takes into account each of the phases in the learning sequence and the phases of the teaching/learning process.

### 3.1 The Roles Played by the Teacher and Pupils

As the person responsible for his own learning, the pupil should be discouraged from being passive and waiting to be told what to do by the teacher. He is an active person, capable of making a personal and genuine contribution, and should be encouraged to take responsibility and to draw on his inner resources to solve a variety of problems in tasks of increasing complexity.

The teacher's role today is no longer simply to demonstrate and to lecture to pupils. He should teach in accordance with pupils' learning patterns and capabilities, offering a variety of learning experiences adapted to their particular characteristics and needs. His roles as catalyst and facilitator, and as an integrator who helps pupils assimilate their experiences, should lead him to develop a comprehensive approach to teaching, taking the appropriate role at each phase of the teaching/learning process. As these three roles are often closely intertwined, the teacher must always be ready to switch from one to another.

### 3.1.1 The Role of Pupils and Teachers in the Initial and Final Evaluations

#### Approach to the Situation

In this phase of the teaching/learning process the teacher acts mainly as a catalyst, giving pupils certain tasks to carry out so that he and they can evaluate their skill level before he begins to teach the sequence. He outlines the objectives of the two types of evaluation situations and explains them clearly. Using questions, or other means, the teacher makes sure pupils understand the situation and know what procedure they are to follow. Then he explains how the results are to be recorded, describes each pupil's role, and helps the group to organize itself.

Pupils should not only understand the purpose of the two types of evaluation situations, they should also know how the evaluation is to be carried out. They should be willing to take whatever roles are necessary to facilitate evaluation (observing, giving instructions, helping out...). In this phase they are preparing to become the main agents in their own evaluation and that of their classmates. They should come to realize that the teacher is not trying to ascertain the best or the worst in the group, he is simply trying to assess each pupil's competence with a view to modifying his teaching or to recording what has been learned.

#### In Action

During this phase, the teacher's role is primarily to be available to offer help to those pupils who need it. The teacher should also see to it that the class follows the predetermined procedures. He should supervise the assignment of teams to each task area, the assignment of roles to pupils within the teams, the execution of tasks, and he should use encouragement freely to sustain motivation.

For his part, the pupil should execute the tasks, help others to perform theirs, and observe and record his own results and those of his classmates. He should encourage the other pupils and, if he has a problem or if questions come up, he should not hesitate to approach the teacher.

#### Learning from the Experience

In this phase, the teacher should encourage pupils to think over the experience they have had. This is a time for objective assessment. The teacher should question pupils to find out if they are satisfied with their results. During the initial evaluation, he will have noted particular areas in which pupils wanted to improve and after the final evaluation, the teacher and pupils assess the progress made. The teacher should take this opportunity to discuss with pupils their reactions to the experience: what pleased or displeased them, what went well and why. Pupils can record their level of satisfaction on a rating scale which will be of help to the teacher in assessing the effectiveness of the lesson. It is important for the teacher to keep in mind the fact that it is his responsibility to make sure that evaluation is an integral part of his teaching.

### 3.1.2 The Roles of the Teacher and Pupils During the Learning Activities

#### Approach to the Situation

The teacher should provide the pupils with stimulating situations designed to generate interest in the tasks to be accomplished. These tasks should involve real problems that are meaningful and challenging to pupils. For each task, the teacher should determine the criteria that will be used to assess whether the pupil's performance is successful or not. This is the appropriate time for him to explain the objective of the lesson to pupils and to describe what is expected of them. He then prepares his instructions and suggests different ways to proceed.

For his part, the pupil should have his own goal or aim regardless of the particular situation or task presented to him. Sometimes the pupil knows that he does not have all the necessary knowledge or skills to achieve this goal, but with the teacher's encouragement, he will feel that the task is feasible and will undertake it. With the help of his classmates, the pupil should work out his course of action, based on the guidelines he receives.

## In Action

The teacher should observe, question, make comments if necessary, and modify some of the tasks. Within the framework of the instructions set down, he should help the pupil accomplish the task, remind him of the principles involved, and give any information that the pupil is unlikely to discover for himself. He should encourage the pupil to try or to repeat some of the tasks. Sometimes a given task is selected for diagnostic evaluation--this is a type of formative evaluation. Using a checklist to record his observations, the teacher should observe any pupils who are experiencing difficulties, correct them, and offer comments. At a suitable time, the teacher may have the group repeat the initial evaluation tasks--this is known as periodic evaluation.

Learning situations may be modified, or the pupil may discover areas that need further work, as a result of these evaluations. They enable the teacher to spot the first signs of difficulty and when the pupil does well, to give him positive feedback.

The pupil should make use of all the means at his disposal during the execution of tasks. He should examine the situation, select data he considers important, integrate it into his interpretation of the situation, decide what action to take, act, and then evaluate the results of his action. After assessing his performance, he should repeat the task. With some tasks, the pupil uses drills, evaluates his progress, and when he is ready, goes on to more difficult exercises. Sometimes the pupil asks for help from others, or offers to help one or more of his classmates. Ideally this phase of the learning process should continue until the learning objective is achieved.

## Learning from the Experience

The teacher should help pupils assess the situation by means of questions or evaluation instruments. He should encourage individual or group assessment for the purpose of helping pupils identify the principles that govern the task and the knowledge and skills they have acquired or have yet to acquire. Together they should look at how these acquisitions can be applied in other more complex tasks. This is a good time for the teacher to evaluate the learning situation, the performance of the group, the positive and negative elements, and how satisfied he and the pupils are with the experience, as well as to identify improvements that could be made. Finally, he should observe and record information as needed.

This is a very important phase for the pupil. He identifies the knowledge and skills he must learn or practice in order to accomplish the task. He identifies what he has learned and what remains to be worked on and evaluates his progress in developing his range of skills. He has an opportunity to talk about his experience and to say how satisfied or dissatisfied he is with it, without fear of negative reaction.

Tables 13 and 14 provide a summary of the roles of the teacher and pupils during the learning sequence.

TABLE 13

THE ROLE OF THE PUPIL

| | TEACHING SEQUENCE | | | | |
|---|---|---|---|---|---|
| Learning Situation / Teaching/Learning Process | Initial Evaluation | Type 1 Situation | Type 2 Situation | Type 3 Situation | Final Evaluation |
| | **Pupil** | **Pupil** | **Pupil** | **Pupil** | **Pupil** |
| Approach to the situation | . responds to the situation (motivation and interest)<br>. understands the tasks<br>. understands the operation<br>. organizes himself | . has a goal<br>. recognizes the need to improve certain skills to achieve this goal<br>. assesses the situation<br>. decides to act<br>. organizes himself | . realizes he needs to practise certain skills or techniques to develop automatic skilled responses<br>. assesses the situation<br>. decides to act<br>. organizes himself | . has a goal<br>. wants to refine his skills and transfer them to other activities<br>. decides to act<br>. organizes himself | . responds to the situation (motivation and interest)<br>. understands the tasks<br>. understands the operation<br>. organizes himself |
| In action | . performs the task(s)<br>. helps to ensure a smooth operation (spots...)<br>. records observations | . explores<br>. discovers<br>. assesses<br>. adapts<br>. solves the problem<br>. records observations as needed | . develops knowledge and skills through practice<br>. assesses<br>. adapts to new challenges<br>. does further practice<br>. records observations as needed | . practises the skills<br>. assesses<br>. adapts<br>. uses them in different activities<br>. records observations as needed | . performs the task(s)<br>. helps to ensure a smooth operation (spots...)<br>. records observations |
| Learning from the experience | . analyzes the observations<br>. reflects on the situation<br>. identifies what he has learned | . reflects on the situation<br>. answers questions<br>. identifies the knowledge and skills he has acquired<br>. identifies those which require further work | . reflects on the situation<br>. identifies the skills that have become automatic<br>. identifies any areas for further practice | . reflects on the situation<br>. assimilates the knowledge and skills acquired<br>. identifies any areas for further practice | . analyzes the observations<br>. reflects on the situation<br>. identifies what he has learned<br>. sums up the effectiveness of the learning situation |

TABLE 14

THE ROLE OF THE TEACHER

| Learning Situation<br>Teaching/ Learning Process | Initial Evaluation | Type 1 Situation | Type 2 Situation | Type 3 Situation | Final Evaluation |
|---|---|---|---|---|---|
| | **Teacher** | **Teacher** | **Teacher** | **Teacher** | **Teacher** |
| Approach to the situation | . presents the situation<br>. answers questions<br>. provides instruments for recording observations<br>. helps with the organization<br>. observes<br>(CATALYST) | . presents the situation<br>. provides instruments for recording observations as needed<br>. asks questions<br>. helps with the organization<br>(CATALYST) | . presents the situation<br>. provides instruments for recording observations as needed<br>. asks questions<br>. helps with the organization<br>(CATALYST) | . presents the situation<br>. provides instruments for recording observations as needed<br>. asks questions<br>. helps with the organization<br>(CATALYST) | . presents the situation<br>. answers questions<br>. provides instruments for recording observations<br>. helps with the organization<br>. observes<br>(CATALYST) |
| In action | . observes the performance of individuals, groups, or teams<br>. makes sure pupils follow instructions<br>. encourages<br>. evaluates (summative evaluation)<br>(FACILITATOR) | . observes the performance of individuals, groups, or teams<br>. makes sure pupils follow instructions<br>. makes observations<br>. evaluates (formative evaluation)<br>. asks questions<br>. encourages<br>(FACILITATOR) | . observes the performance of individuals, groups, or teams<br>. makes sure pupils follow instructions<br>. observes<br>. evaluates (formative evaluation)<br>. modifies the tasks<br>. asks questions<br>. encourages<br>(FACILITATOR) | . observes the performance of individuals, groups, or teams<br>. makes sure pupils follow instructions<br>. observes<br>. evaluates (formative evaluation)<br>. makes observations<br>. gives pupils information<br>. encourages<br>(FACILITATOR) | . observes the performance of individuals, groups, or teams<br>. makes sure pupils follow instructions<br>. encourages<br>. evaluates (summative evaluation)<br>(FACILITATOR) |
| Learning from the experience | . helps pupils assess the situation<br>. helps pupils to identify what they have learned<br>. asks and answers questions<br>(INTEGRATOR) | . helps pupils identify the principles or laws they have discovered<br>. assesses performance and results obtained<br>. asks questions<br>(INTEGRATOR) | . helps pupils identify the knowledge and skills acquired and those that need further work<br>. assesses performance and results obtained<br>. asks questions<br>(INTEGRATOR) | . helps pupils in the transfer of skills<br>. assesses performance and results obtained<br>. asks questions<br>(INTEGRATOR) | . helps pupils assess the situation<br>- level of satisfaction<br>- improvements to make<br>. helps pupils to identify what they have learned<br>(INTEGRATOR) |

## 3.2 Skills Required for Effective Teaching

The second part of this chapter could not have been written without the findings from the following research:

"Beginning Teacher Evaluation Study" (B.T.E.S.), Fisher et al 1978; "Jenefer Garden Children's Project," Hall, Delquadri, and Harris, 1977; works of Brophy and Evertson, 1974; Good and Backman, 1977; Kounin, 1970; Rosenshine, 1978; Bennett, 1978; Siedentop, 1976; Siedentop, Birdwell, and Metzler, 1978; Solomon and Kendall, 1976; Smith, Smoll and Curtis, 1977; Smith, Smoll, and Hunt, 1977; Brunelle et al, 1980; Berliner and Tikunoff, 1976; Hurwitz, 1978; Brunelle, 1979.

These works provide information concerning important criteria for organizing the most suitable learning conditions.

The amount of learning time spent in a positive social climate, together with a satisfactory level of achievement, give evidence of a skilled and effective teacher.

### 3.2.1 Skills Required for Making Productive Use of Learning Time

The following skills enable the teacher to keep the pupil's attention, encourage his participation, and contribute to his success:

A. Skill in minimizing administrative activities and the time they take;
B. Skill in communicating the course objectives and giving clear, concise, and appropriate explanations;
C. Skill in providing the pupil with opportunities to participate;
D. Skill in proposing problems or challenges suited to the pupil's level of ability.

These skills are discussed and their implications examined in the pages that follow.

## A. SKILL IN MINIMIZING ADMINISTRATIVE ACTIVITIES AND THE TIME THEY TAKE.

**Example:**

- taking attendance;
- telling pupils to take out equipment;
- storing material in a functional way;
- obtaining pupils' attention;
- waiting;
- etc.

There are certain administrative tasks that must be performed when a group meets initially. However, pupils should quickly learn how to organize themselves and how to act without always having to be told what to do.
Administration time refers to the entire period of time that is not devoted to teaching per se.

**Example:**

- time lapse between pupil arrival in the gym and the beginning of the class;
- time taken to attract pupil attention with a given signal;
- time required to resume activity after an explanation, demonstration, or observation;
- time lapse between two different activities (transition);
- etc.

Administration time involves for the most part preparatory activities (waiting, transition, organization, rest, personal matters) which cut into learning time in a physical education period.

Several studies conducted during real teaching situations show that teachers spend an average of 20 to 35% of the period on preparatory activities. Variations from 0 to 65% of the time can be expected. Waiting by pupils takes up a large proportion of this time.

Obviously, time spent in organization or advance planning reduces the time spent on learning. The teacher should look for ways to reduce preparation time.

## How To Reduce Administration Time

The best way to reduce administration time is to develop pupils' self-management skills. They can readily take responsibility if given the opportunity. To facilitate this, the teacher can:

- inform pupils in advance, or post the activities to be done upon arrival in class;
- communicate as much information as possible without using class-time (flyers, posters, etc.);
- start at the scheduled time;
- develop a rapid way of taking attendance if this is compulsory;
- clearly identify the organizing skills that should be mastered:
  - know how to quickly form a circle, a line, or a column allowing for enough space between each pupil;
  - know how to form pairs, groups of three, or five;
  - know how to move quickly to the right place;
  - know where the equipment can be found, know how to take it out, how to move it, how to set it up, and how to put it back quickly;
  - know how to disperse and assemble quickly;
- give positive reinforcement to the pupils who react well to instructions and ignore those who react slowly;
- establish a clear and unmistakeable signal;
- develop pupils' self evaluation skills;
- give pupils the maximum rest time needed after a particularly tiring activity;
- minimize discussion that has nothing to do with the material to be taught; it can be discussed at some other time.

Clear and emphatic instructions intended to help pupils get started quickly on an activity, will have a favourable effect on pupils' transition time. A group that reacts quickly and efficiently, without losing time, will have more time to learn.

## B. SKILL IN COMMUNICATING THE COURSE OBJECTIVES AND GIVING CLEAR, CONCISE AND APPROPRIATE EXPLANATIONS.

The teacher who wishes to enable his pupils to learn as much as possible is constantly faced with the challenge of reducing the time spent on explanations and of making them explicit.

Observation of teacher behaviour during classes indicates that elementary school teachers spend about 15% of their time giving explanations, though this may vary between 1 and 38%. In transmitting information the teacher generally uses verbal communication. It is actually rather surprising that the average teacher uses only six demonstrations per period and almost never asks pupils to help.

How to improve the teacher's communicative skills

A few suggestions for consideration are:

- for each class period, plan a sequence of activities that will lead to a specific objective and arrange for whatever is required to carry them out,
- prepare supplementary resources to illustrate explanations (tables, posters, audio-visuals, demonstrations by pupils).

In this case, the teacher should:

- be sure to make a readable presentation in a form familiar to pupils;
- make sure that the posters are read;
- make clear, neat, and simple diagrams;
- present posters in an attractive way;
- place pupils in a position that will enable them to see and hear clearly.

Improvement in communication depends on the quality of the information and explanations given, and requires the teacher:

- To have the pupils' attention;
- To use vocabulary with which the pupils are familiar;
- To speak loudly enough to be heard;
- To use short, clear, and direct sentences;
- To communicate one idea at a time.

## C. SKILL IN PROVIDING THE PUPIL WITH OPPORTUNITIES TO PARTICIPATE.

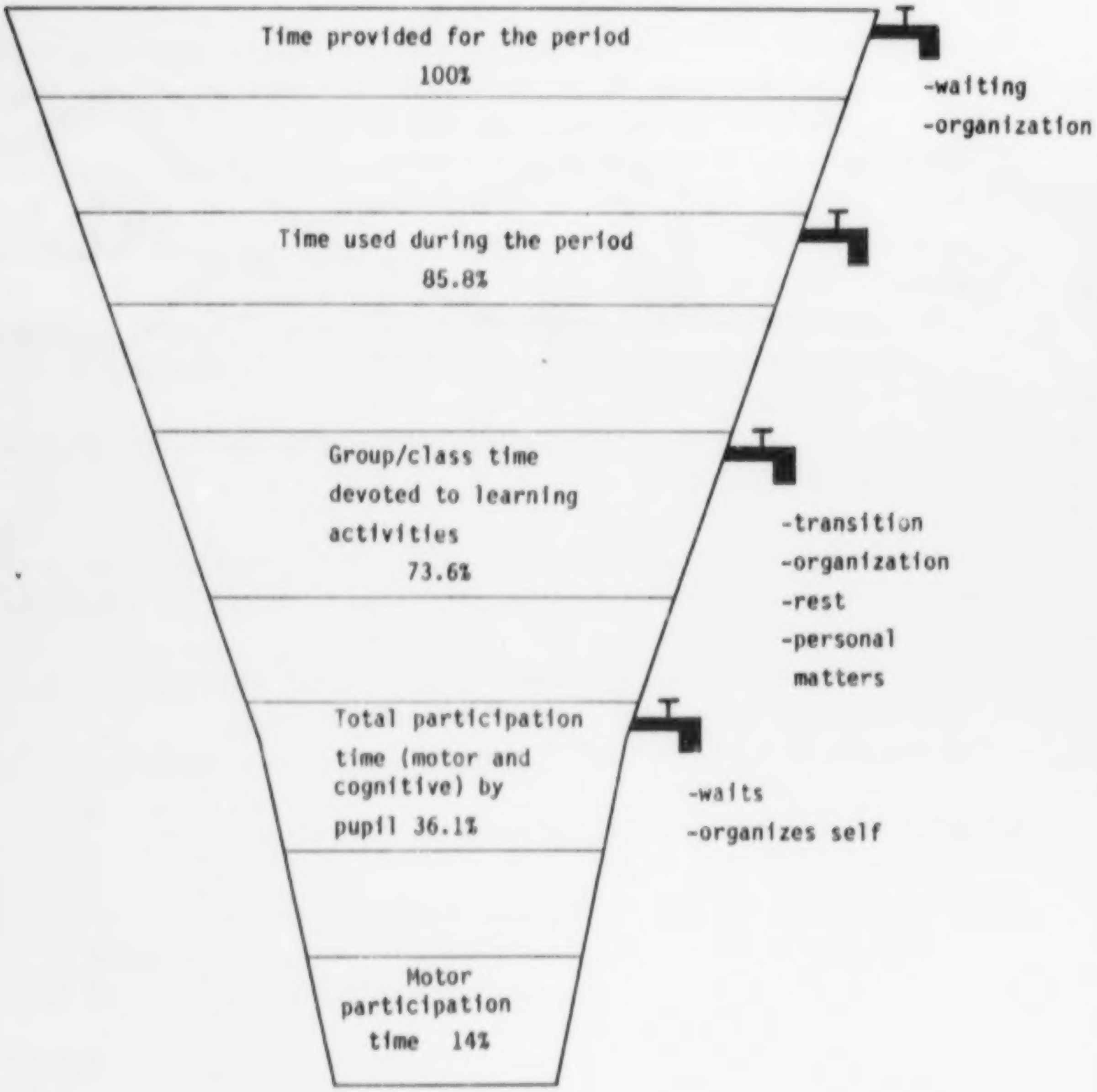
As previously noted, a decrease in administrative activities will result in an increase of learning time.

The ability to stimulate pupil activity in a group/class situation is another important factor that affects learning time. Studies of elementary school pupils indicate that on the average more than a third of their physical education time is spent waiting their turn. Studies show that while the group/class is engaged in a learning activity, elementary school pupils are in inactive situations 47.9% of the time, and in active ones only 19.8% of the time.

The table that follows shows the funnel-effect of pupil participation time during the physical education period.

## TABLE 15

## FUNNEL-EFFECT OF PUPIL-TIME PARTICIPATION DURING THE PHYSICAL EDUCATION PERIOD


Time provided for the period
100%
-waiting
-organization
Time used during the period
85.8%
Group/class time
devoted to learning
activities
73.6%
-transition
-organization
-rest
-personal
matters
Total participation
time (motor and
cognitive) by
pupil 36.1%
-waits
-organizes self
Motor
participation
time 14%

## How to increase pupil participation

There are three complementary avenues that may be followed to optimize pupil participation time. The first involves choosing types of "organization" that take the number of participants and the available space into consideration. The teacher should list the means that will enable all pupils to start and finish together and make optimum use of space.

The second avenue is to seek to make the non-participating pupils' wait as productive as possible when not all pupils can participate at the same time. This can be done if the teacher recognizes that he can:

- modify the rules of the game so that a participant is not excluded when he cannot perform a task or when he makes an error;
- give pupils who are not participating, observation instruments related to phases of the game, tactics, or procedures;
- have these pupils share certain tasks connected with the activity: refereeing, timing, keeping score, evaluating peers, in other words, give pupils responsibilities;
- create sub-tasks which will allow non-participating pupils to reinforce skills of their choice.

The third avenue involves maintaining pupils' level of participation and their attention. Success in this depends on the teacher's ability to adjust his plans to the needs of the pupils. The teacher should:

- be alert and conscious of his surroundings, no matter what the activity:
- keep the class flowing evenly--avoid slow-downs or stops;
- be flexible in improvising and adapting to different circumstances.

## D. SKILL IN PROVIDING CHALLENGES SUITED TO THE PUPIL'S LEVEL.

Skill in providing the pupil with tasks adapted to his needs is a fourth aspect that affects the amount of learning time. This skill is reflected in the teacher's choice of learning situations and the modifications he makes when needed.

Adjusting the degree of difficulty of a task depends in large measure on the teacher's ability to evaluate pupils' progress regularly. Based on critical observation of pupils' behaviour and what took place during the period, the teacher should be able to determine how appropriate his preparations were, and to make any necessary adaptations or modifications.

Studies of physical education teachers show that a quarter of their time is spent observing pupil behaviour. This gives little support to the belief that physical education teachers have no time for educational evaluation.

It is also revealing that the teacher spends 60% of his time stimulating or motivating the pupil: "Well done", "That's it", "Go on". It is interesting to note that only 6% of the comments are related to the course objectives.

To make significant comments one must:

- have a good understanding of the learning objective;
- formulate and communicate realistic goals that pupils see as being achievable;
- set aside enough time for structured observation;
- be able to make quick and accurate judgements.

## How to ensure the optimal degree of difficulty in a situation presented to the pupil

It is impossible to ensure an optimal degree of difficulty if all members of the class execute a task in the same way and at the same time. There are always those for whom it will be too hard and those for whom it will be too easy. How can the teacher solve this dilemma?

There are three possibilities. First, have pupils develop strategies for adjusting the level of difficulty of a task.

Take, for example, an exercise designed to improve projection and reception of an object with a partner. The strategy used may be to have the pupils move back one step if they exchange the object successfully twice, and to move forward one step if they miss the exchange.
This allows the teacher to establish the class level and determine which pupils need help.

This also provides pupils with an opportunity for self-evaluation, as well as ensuring an optimal degree of difficulty.

Second, offer a choice of tasks of various degrees of difficulty. For some activities, for which it is difficult to develop adjustment strategies, the teacher may develop a certain task with variations that can be made increasingly difficult or easy.

Take for example an exercise in which the pupil must clear an obstacle. The pupil may be allowed to chose between tasks of different degrees of difficulty. When the pupil has successfully cleared the obstacle a number of times at a certain level or when he feels ready, he may attempt a more difficult level. Achievement criteria for going on to more difficult tasks should be selected in cooperation with the pupils.

Third, modify and adjust rules according to perceived needs and goals. For a game or a group activity, the teacher with the pupils can modify the rules so that the degree of difficulty is increased or decreased.

The teacher is faced with the problem of presenting pupils with motivating and challenging situations that will enable them to experience success.

Finally, the two key factors in motivating pupils are the ability to adjust the level of difficulty and the ability to ensure maximum participation time.

In keeping with the belief that learning is self-generated by pupils interacting with an environment organized to stimulate them, the teacher must make sure that their environment is challenging and will facilitate learning.

To improve the quality and length of learning time, the teacher should give special attention to the preparation of this environment and systematically assess it in terms of his teaching.

### 3.2.2 Skills Required for Establishing and Maintaining a Positive Social Environment

The teacher and the pupils share a joint responsibility for creating a positive learning environment. At the beginning of the year, however, it is up to the physical education teacher to encourage and maintain desirable pupil behaviour, using a positive approach.

The social climate of the class basically rests on:

A. Skill in establishing, with the pupils, expectations and clear rules and having them respected;
B. Skill in giving recognition to pupils' accomplishments.
C. Skill in neutralizing inappropriate behaviour rapidly, but positively;
D. Skill in developing personal qualities.

A. SKILL IN ESTABLISHING CLEAR RULES AND EXPECTATIONS WITH THE PUPILS, AND HAVING THEM RESPECTED.

The teacher makes daily decisions concerning appropriate behaviour in the gymnasium. Every time he reprimands a pupil, he helps to establish the limits of acceptable behaviour. It is unfortunate that at times pupils only learn the rules by breaking them. Studies on this topic show a very negative attitude with regard to the breaking of rules. Instead of telling pupils what is expected of them, they are told, "Don't do this" or "Don't do that."

For this reason it is important to specify clearly the rules governing pupils' behaviour among themselves, between pupils and teacher, and between pupils and the environment.

Some questions that merit special attention follow:

## Pupil-Teacher Interaction.

How should the pupils behave when you are talking or giving an explanation? How should the pupils ask questions or make comments? Should they put up their hand, or should they use another type of signal? Should they make comments as the need arises? What does the pupil do when he's not sure of something? Etc.

What do you consider an appropriate level of participation? Should the pupils explore every aspect of the learning activity? If the pupils must stop to read instructions, how quickly are they expected to resume the activity?

## Pupil Interaction.

When is it appropriate or inappropriate for the pupils to interact with each other? What is an acceptable noise level for each activity? In what situations would you like pupils to work in a team?

## Pupil-Environment Interaction

How should the pupils treat the equipment? Should they sit on or kick a given ball? How should they behave with certain materials?

Your answer to the above questions will give you a better idea of what you expect from your pupils. The rules concerning behaviour and conduct that you have identified are the basis for effective class management.

For these rules to be followed, they should be clear and easy to memorize. It is preferable to:

- establish short rules that describe exactly what you mean;
- give only a few rules at one time;
- remind pupils of them at times other than just when they have been broken.

It is important to remember not to react only when a pupil is misbehaving. An effective way of determining how well pupils have understood the rules is to have them state the rules in their own words.

## B. SKILL IN GIVING RECOGNITION TO PUPILS' ACCOMPLISHMENTS

The way in which the teacher responds to the pupil's accomplishments influences the social environment of the class. Positive reinforcement is the best way to motivate and encourage the pupil.

The teacher's positive reactions can take the following forms.

Global: Yes, good work! Well done! You're improving! I'm happy! I'm proud of you! I like what you've done!

Non-Verbal: Smile, nod of approval, clapping, wink, ruffling the pupil's hair.

Informative: The blue team really got organized quickly this time; Thanks for listening, Jack; Good concentration, Mark; It only took you twelve seconds to get into place; Did you notice how Jane helped Robert?

Positive Reinforcement: I like to see you get into place quickly, it gives us more time to work; That's a good answer, you paid attention to the explanations; John you've worked hard over the last two weeks, that's good, you have made considerable improvement.

Reactions can be shown in three different ways:

- to a pupil, in private, discreetly.
- to a pupil, in public, so that the group will be influenced.
- to a sub-group of pupils or to the whole group in a way that shows recognition of overall class performance.

The effective teacher diversifies his means of interaction by making considerable use of the non-verbal, by dividing his interaction amongst all pupils, by using group interaction occasionally, by changing the intonation of his voice and the degree of his enthusiasm, and by mimicking.

However, if the behaviour of one or more pupils is particularly disturbing, it is best to make these pupils the focus of positive interaction until the appropriate behaviour is established. One can call on them when they do something well and ignore them as much as possible when their behaviour disturbs the teacher or the group.

At the beginning when teachers try to develop a positive approach, they often tend to emphasize the positive behaviours of one pupil when another pupil's behaviour is inappropriate.

The scenario may unfold as follows:

You are in the process of giving explanations and you notice that Robert and Natalie are talking instead of looking at you. You then look for a pupil who is paying attention and say: "Lewis will certainly know what to do because he is paying attention to the explanation."

This approach is quite appropriate. It is a legitimate and natural way to neutralize the behaviour of Robert and Natalie. However, it is not enough to give positive reinforcement only when provoked by inappropriate behaviour.

In order to improve the psychological well being of the pupils, it is desirable:

- to have realistic expectations and to consistently express satisfaction with good performance;
- to praise efforts as much as the results obtained;
- to give immediate encouragement after a mistake;
- to avoid making hostile and punitive comments;
- to avoid punishing the pupil when things aren't going well and he is experiencing difficulties etc.

When the teacher considers it appropriate to comment after a mistake is made he should always do so in a positive and encouraging manner. A correction should include three important elements: start by complimenting the pupil on something he did well, explain to him how he can improve what he is doing, and conclude with another positive comment, (compliment-correction-compliment).

## C. SKILL IN NEUTRALIZING INAPPROPRIATE BEHAVIOUR RAPIDLY BUT POSITIVELY.

The best way to neutralize inappropriate behaviours is to anticipate them and prevent them from occurring.

When creating a positive social environment, the effective teacher makes sure the activities get underway as promptly as possible. He quickly detects behaviours likely to cause a disturbance, and resolves the problem calmly and appropriately before matters get out of hand. For example, the teacher can discreetly ask the pupil exhibiting symptoms of disruptive behaviour if he needs help, if he knows the objective of the activity, if he has questions, or if he is having difficulties, while attracting little attention from the other pupils, always remaining polite, and centring his efforts on the pupil's task or behaviour rather than the pupil himself.

If the teacher responds soon after the incident, he gives the impression that he sees everything that goes on in class, and in so doing gains the respect of his pupils. However, the following errors should be avoided:

- addressing an onlooker instead of the initiator;
- ignoring serious misbehaviour and taking action on a trivial issue;
- always paying attention to the same pupils.

It is not always possible to prevent undesirable behaviour. It should be expected that certain inappropriate behaviours may appear sooner or later, despite the teacher's alertness.

A second approach the teacher can use to neutralize disruptive behaviour is to ignore it unless it is harmful or offensive to the other pupils. This strategy in conjunction with that of praising the same pupils when they demonstrate appropriate behaviour may gradually eliminate the undesirable behaviour and replace it by more suitable one.

It would be unrealistic to think that the teacher should never punish the pupils, for these are cases in which punishment is the quickest and most effective means of achieving a short term objective. All behaviour that can be harmful to its author, to another pupil, or to the environment must be immediately neutralized and, very often, punishment is the most effective means.

The appearance of negative stimulus or the withdrawal of positive stimulus brought about by punishment automatically triggers an effective negative response in the pupil which he associates with the activity. By nature the pupil learns to avoid that which leads to punishment and learns to feel a negative emotion with respect to everything involved with the punishment. It has been proved that negative responses can trigger inappropriate behaviour. Furthermore, it seems clear that the constant use of negative strategies to the detriment of positive ones produces a social climate marked by hostility, fear, and anxiety.

The most important factor in creating a positive social climate is not to completely avoid the use of negative strategies, but rather to maintain a higher ratio of positive ones. If the teacher wishes to know his normal ratio, he needs only to ask a friend or colleague to watch him teach a few times and to record what is observed.

## D. SKILL IN DEVELOPING HIS PERSONAL QUALITIES

The way in which a teacher behaves in his interactions with pupils is a determining factor in establishing the social climate of the class.

Coherence, sincerity, concern, and enthusiasm are four important qualities for teachers to possess. Pupils respond positively to teachers who have these qualities.

### Coherence

Coherence is the logic and consistency of a person's actions or reactions toward the same behaviours. For example, a pupil's consistent behaviour will be treated in a similar way from day to day. The teacher should be concerned with the consistency between what he says and what he does.

Coherence represents one of the most important qualities a teacher can possess. It can be developed by all who take the time to identify the relevant values and behaviours.

### Sincerity

Sincerity is the quality possessed by those who demonstrate to others feelings of honesty, good faith, concern for others and the absence of manipulation.

For example, the teacher who makes comments containing specific and appropriate information demonstrates to pupils that he cares enough to supervise them, to observe them closely, and to tell them how much he appreciates them. He therefore takes the time to concern himself with them and to evaluate their efforts fairly.

## Concern

Concern is sustained and careful consideration of the interests of each pupil, their needs, their values, and what they like to do.

To achieve this the teacher should participate in pupils' activities, taking the time to get to know them as people and showing them that he cares about them.

It is this consideration and concern for pupils and what they do that enables the teacher to gain the confidence of his pupils so that they will share their needs and values with him.

## Enthusiasm

Enthusiasm is the quality possessed by the teacher who inspires his pupils to approach their tasks willingly and eagerly. It is a fundamental quality in establishing a positive teaching style.

The teacher who demonstrates by his attitude that he has an interest in his pupils, and the expectations they have for themselves, stimulates their involvement. The more the teacher shows that his pupils are capable of many things, the more he will gain their confidence and enable each to develop.

This look into the close relationship between pupil and teacher is intended to help those who wish to re-examine their teaching approach. From the information provided in this chapter, the teacher should be able to find topics for personal or group consideration that could lead to the development of an individual plan of action involving skills that merit particular attention.

Everyone has a responsibility to analyze his own teaching and to take the necessary steps to improve the quality of his approach. He can, if he wishes, undertake this analysis alone, or with the help of a colleague or someone else who can help him.

# CHAPTER 4

# 4.0 EVALUATION OF LEARNING

## CHAPTER 4

## 4.0 EVALUATION OF LEARNING

This chapter is devoted exclusively to evaluation which, as shown in the preceding chapters, is an essential part of the teaching and learning process. It provides more detailed information on the evaluation procedure used throughout the learning sequence and in individual lessons.

### 4.1 Review of Evaluation Concepts

Educational evaluation is a process intended to support appraisals of the pupil's progress in certain areas of his development, with a view to making the best possible decisions about his future progress.

The basic aim of educational evaluation is to improve decisions concerning the learning process. A further aim is to furnish pupils, parents, and other interested persons with information about the pupil's progress.

Since evaluation is a process that is essential to decision making, it goes without saying that everyone who needs to make decisions in an educational context must make use of it.

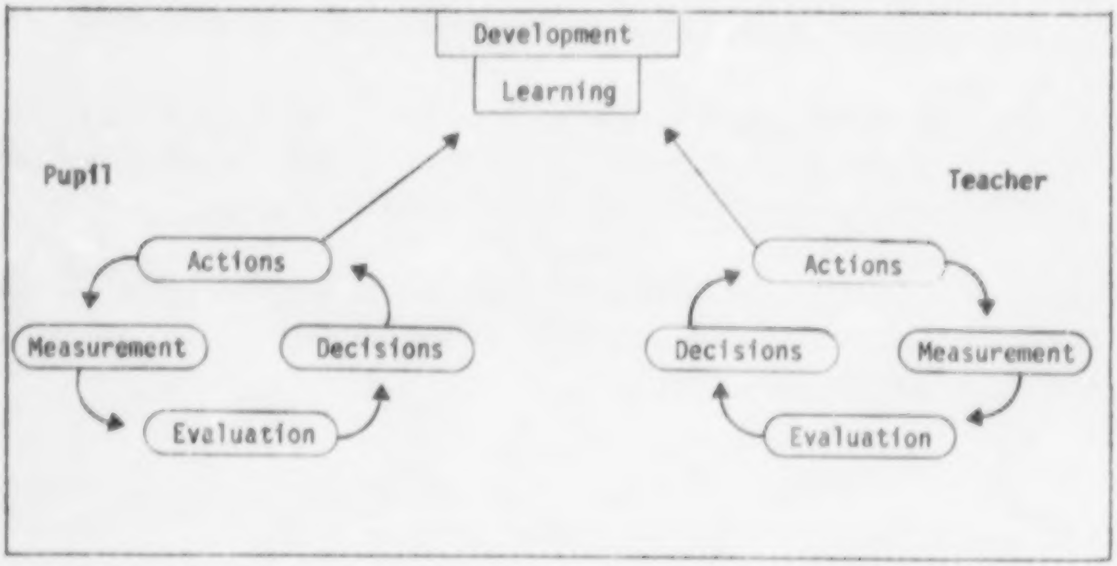
The most important person who will be making decisions related to learning is the pupil himself. To help him, the teacher should provide instruments and opportunities for self-evaluation and evaluation of other pupils.

The other person who has to make decisions is the teacher. He has to observe constantly, collect information, evaluate, choose relevant behaviours to observe, suggest changes, or reinforce what has been achieved.

Table 16 shows the evaluation procedure in diagram form.

TABLE 16

**The Evaluation Process Used in the Teaching/Learning Process**



Development
Learning
Pupil
Teacher
Actions
Measurement
Decisions
Evaluation
Actions
Decisions
Measurement
Evaluation

The concept of educational evaluation presented here requires a thorough knowledge and understanding on the part of the teacher of the sequence of operations and phases involved in this evaluation process. The planning, development, and application phases are explained in the following pages.

### 4.2 The Planning Phase of the Evaluation Process

The planning phase is part of the planning of the evaluation process. During this phase, teachers select the times during learning when evaluation will be carried out and, for each occasion, the purpose and type of evaluation to be used, and the kinds of decisions that will follow.

In an instructional context, evaluation can be applied at three different times: at the beginning, during, and at the end of learning.

The decisions to be made on the basis of these evaluations will vary according to the timing of the evaluation.

The type of evaluation used also varies. Formative evaluation is effected upon completion of each learning task for the purpose of diagnosing and remedying any difficulties that pupils may have. It serves as a means whereby teachers can monitor their operations and keep track of their pupils' progress in relation to the objectives being pursued.

Formative evaluation which is effected throughout the learning situation may be periodic or interactive. It is termed "periodic" when it is used at specific times to meet the needs of the group. It is termed "interactive" when it is used during the learning process and involves the teacher and one or more pupils who are having difficulties.

Summative evaluation is effected at the end of an important learning sequence. It provides a sort of balance sheet of the pupil's attainments and may be done at the beginning or the end of a sequence. Unlike formative evaluation, which is of a private nature (a dialogue between the teacher and the pupil), summative evaluation provides information to be made public. It is used to report to parents or to decide on promotion.

Table 17 gives a summary of the steps covered in the planning phase of the evaluation process.

## TABLE 17

## The Decision-Making Process in the Planning Phase

| | Before | | During | | After |
|---|---|---|---|---|---|
| 1. Time of Application | At the beginning of the sequence | | Periodically | As needed | At the end of the sequence |
| 2. Types of Decisions | **EDUCATIONAL**<br>To modify the organization and planning of teaching strategies | | **EDUCATIONAL**<br>To modify the organization and the strategies used (teacher)<br>To modify the way he learns (pupil) | | **EDUCATIONAL**<br>To modify planning of future units<br>**ADMINISTRATIVE**<br>To decide on promotion |
| 3. Aims of Evaluation | To evaluate prerequisite entry skills and knowledge | To evaluate the pupil's level of development in relation to the planned learning tasks<br>To obtain basic information | To follow pupils' progress towards achievement of the learning objective<br>To identify pupils who are experiencing difficulties<br>To detect learning difficulties | | To evaluate the learning achieved by the end of the learning unit |
| 4. Type and Purpose of Evaluation | Formative<br>Modification | Summative<br>Balance sheet of skills and knowledge already acquired | Periodic Formative<br>Modification | Interactive Formative<br>Modification | Summative<br>Balance sheet of learning achieved |

### 4.3 The Development and Application Phases of the Evaluation Process

These phases are closely related since one is essentially the application of the other. The difference between them lies in the order in which each is implemented. While these two phases are described together in this document, it is easy to distinguish the operations that each of these phases requires.

During the development phase, the teacher pinpoints the elements to be evaluated. Different elements such as concepts, attitudes, prerequisites, or learning objectives may be selected for evaluation depending on the timing of the evaluation.

#### 4.3.1 Selection or Construction of Measurement Instruments

When the teacher has selected the elements to be evaluated, he then prepares questions or tasks. These should be designed to elicit responses or behaviours appropriate to the knowledge or skill being evaluated. He should make up a test or an examination, or select one of the many that are available. The measurement instrument may include a number of questions or tasks (in the case of examinations or tests), or a single question or task. It may vary in level of difficulty (see 4.3.3)

Since the Physical Education program is essentially the study of movement, the measurement instruments selected for the program should be ones which include tasks to be carried out.

This kind of instrument, however, presents a major drawback. The performance of a task takes only a short time and, when completed, leaves no trace or record unless it has been filmed. Checklists and criterion-referenced checklists are the most suitable measurement instruments for task evaluation. The teacher is responsible for developing his own observation instruments which will enable him to record his pupils' performance in the fairest and most objective manner possible. Examples of different types of instruments are given in 4.5.

### 4.3.2 Techniques for Designing Evaluation Tasks for Use Before, During, and After the Learning Sequence.

Evaluation tasks should be constructed on the basis of the specific objectives of the program, i.e. the specification of the terminal objectives or subjects of study.

For the initial evaluation to assess pupils' level of development in relation to the objectives to be attained, the teacher should select a representative sampling of tasks (the number will depend upon conditions and time) from the dimensions (position of the person who is projecting, types of projection, characteristics of the object projected, etc.) chosen for the learning objective.

To evaluate prerequisite attitudes or knowledge, the teacher should use oral or written test questions. Booklet 5 of the Measurement and Evaluation Guides contains useful information on the construction of relevant test items.

For periodic formative evaluation during class periods, evaluation tasks may be based on the specific variables for the subject of study.

Evaluation tasks given at the end of the learning unit are made up in the same way.

### 4.3.3 Level of Difficulty of Evaluation Tasks

The evaluation tasks set for the initial evaluation should not be too difficult. The aim is to find out whether pupils have sufficient mastery of the prerequisite skills and knowledge to be able to pursue the objectives of the unit. Evaluation tasks designed to assess the pupils' level of development with regard to the learning objectives should be of average difficulty. The tasks for the final evaluation should allow a comparison to be drawn between the initial and final results to ascertain how much progress has been made.

The tasks for periodic formative evaluation should be of average difficulty if they are to provide meaningful information regarding the difficulties experienced by pupils.

### 4.3.4 Application of Measurement and Observation Instruments

All pupils should be given an initial evaluation. It may be carried out by classmates (one or more) or by the teacher. Co-evaluation by pupils is preferred because it saves time and facilitates class organization. The same approach can be used for the other types of evaluation, with the exception of individual interactive formative evaluation. In this case, it is unnecessary to obtain information about all the pupils in the class. The teacher should only evaluate those pupils who have persistent or serious problems. Given the nature of the observation technique used in these circumstances, the observer may be the teacher, a classmate, or the pupil himself (self-evaluation). It is important to provide the observer with the indicators needed to effect the evaluation.

### 4.3.5 Collection of Information

It is a simple operation to collect information for final evaluations. The instrument used for obtaining this information serves both as an answer sheet and scoring key. For each pupil, the number of times a characteristic appears or does not appear, is shown. The way in which results should be recorded is usually explained in the instructions which accompany the instrument. It is the characteristics of successful or unsuccessful performances that are important to record here.

For purposes of evaluating the way the pupil performs (process), or the way he performs and the result (process-product), there are two types of measurement instruments that have been selected to record the pupil's responses. Examples of these types of instrument are given in 4.5. They are designed to facilitate co-evaluation and self-evaluation by pupils.

It is not necessary to record all the information obtained through measurement instruments (questions or tasks). It is up to the person evaluating to decide whether it is necessary to record the results or not. However, the results of the initial evaluation must always be recorded because it is by comparing these to the final results that the teacher finds out how much learning has been achieved.

### 4.3.6 Interpretation of Results

With the initial and final summative evaluation, there is no need to compare the results to a norm. Simple comparison of the results is enough to allow the teacher to ascertain the amount of progress made.

During the learning sequence, the results of periodic or diagnostic formative evaluation are compared to the initial results rather than to a norm. Information obtained from interactive evaluation concerns the pupil's performance and serves to identify difficulties as they arise.

When mastery of prerequisite entry behaviours is evaluated, the results must be compared with achievement standards because the prerequisite behaviours are in themselves the minimum standard of skill or knowledge required to tackle the learning objective. These norms may be qualitative, quantitative, or a mixture of both, and may cover different behaviours. Table 18 gives a summary of the relationships between the prerequisite entry behaviours and the two types of standards. There are various methods for determining these, but normally the teacher has sufficient experience to be able to set them, without using a formal method.

TABLE 18

**Types of Standards Used in Evaluating Prerequisite Entry Behaviours**

| **Types of Prerequisite Entry Behaviours** | **Measurement Instrument** | Standards | |
|---|---|---|---|
| | | **Quantitative** | **Qualitative** |
| Knowledge | Questions | Minimal number of correct answers | Determining questions which should be answered correctly |
| Skills | Tasks | Minimal number of tasks successfully performed. | Determining the tasks which must be successfully completed |

### 4.3.7 Making Judgements

Making a judgement is the final step in the evaluation process. It involves an assessment, which the pupil and the teacher make, of the result of the evaluation. It is made by comparing the information obtained with the specific criteria or minimum standard used. In the latter case, the judgement is often simply a matter of assessing whether mastery of prerequisite skills or knowledge is sufficient or not.

Table 19 gives a summary of all the elements involved in the development and application phases of the evaluation process.

## TABLE 19

## The Decision-Making Process in the Development and Application Phases

| 1. Time of Application | Before | | During | | After |
|---|---|---|---|---|---|
| 2. Type and Purpose of Evaluation | Formative<br>Modification | Summative<br>Balance sheet of skills and knowledge already acquired | Periodic Formative<br>Modification | Interactive Formative<br>Modification | Summative<br>Balance sheet of learning achieved |
| 3. Focus of Evaluation | .Concepts<br>.Attitudes<br>.Skills required to begin the sequence | Learning objectives | Learning objectives | Pupil's performance | Learning objectives |
| 4. Measurement Instrument | Selected sampling of questions on knowledge and attitudes, or tasks to assess prerequisite skills | Evaluation tasks based on representative environmental variables for the learning objectives | Evaluation tasks based on the set of environmental variables for the learning objectives | Observation of the pupil's performance | Evaluation tasks based on representative environmental variables for the learning objectives |
| 5. Level of Difficulty | Easy | Average | Average | | Average |
| 6. Application and Observation | .For the whole class<br>.Observation by classmates or the teacher | .For the whole class<br>.Observation by classmates or the teacher | .For the whole class<br>.Observation by classmates or the teacher | .For pupils having difficulty<br>.By the teacher, a classmate, or the pupil himself | .For the whole class<br>.Observation by classmates, the teacher, or an outside observer |
| 7. Collection of Information | .Answers or tasks performed by pupils<br>.Optional recording of results<br>.Appropriate method of observation | .Tasks performed by pupils<br>.Compulsory recording of results<br>.Appropriate method of observation | .Performance by pupils<br>.Optional recording of results<br>.Appropriate method of observation | .Performance by the pupil<br>.Optional recording of results<br>.Appropriate method of observation | .Performance by pupils<br>.Compulsory recording of results<br>.Appropriate method of observation |
| 8. Interpretation | Based on qualitative or quantitative norms | Analysis of information obtained | Comparison of information obtained with the results of the initial evaluation | Analysis of the pupil's performance | Analysis of information obtained and comparison with the results of the initial evaluation |
| 9. Judgement | As to whether pupils have achieved the prerequisite entry behaviours | | As to whether pupils are learning the desired behaviours or not | | As to whether the objectives have been achieved or not |

### 4.3.8 Decision-Making and Follow-Up Action

Following evaluation, different decisions and follow-up actions may be taken with a view to facilitating the achievement of objectives.

The teacher and the pupil should examine the judgement made on the basis of an analysis of the information and, from this, consider the best possible decisions to be made or actions to be taken to ensure future progress. The decisions or choice of action may be made either by the teacher alone or by the teacher and pupil together.

The time when the evaluation takes place will dictate the types of decisions or action that will be taken.

| | Before | | During | | After |
|---|---|---|---|---|---|
| 10. Decisions or Action | To make up the deficiencies the pupil may have in terms of prerequisite entry behaviours<br>To modify the learning situation | To create special small working groups<br>To modify the means of implementation | To help pupils to overcome any difficulties identified<br>To modify the means of implementation | To help the pupil find ways to improve his approach to learning<br>To offer helpful advice to the pupil<br>To modify the learning context | To modify planning of future lessons<br>To promote<br>To furnish information |

### 4.3.9 Educational Evaluation and the Decision-Making Process

In the view of the Ministère, educational evaluation should enable those concerned to make informed decisions with a view to ensuring that pupils develop in the best possible way.

Table 20 gives a summary of the following operations and elements of the evaluation process:

(a) Planning the elements:
- time of application
- type of decision
- aim of evaluation
- purpose of evaluation

(b) Development of the elements:

- focus of evaluation
- measurement instrument
- collection of information
- establishment of standards
- types of judgements
- possible actions and their consequences

(c) Application of the elements:

- measurement instrument
- correction or compiling of information
- analysis, comparison, or interpretation
- judgement made
- decisions made or actions taken

TABLE 20

Operations and Elements of Educational Evaluation

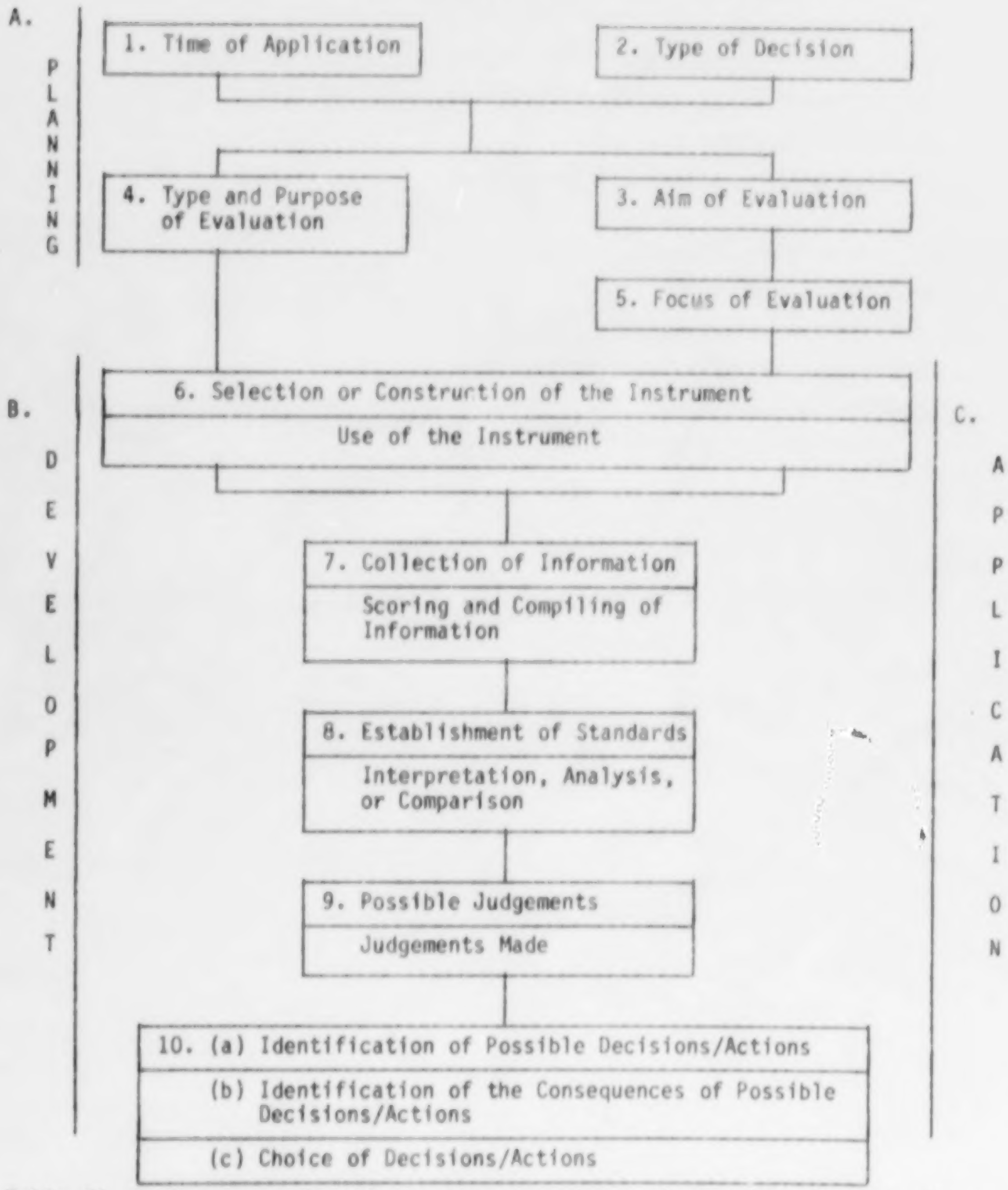

A.
PLANNING
1. Time of Application
2. Type of Decision
4. Type and Purpose of Evaluation
3. Aim of Evaluation
5. Focus of Evaluation
B.
DEVELOPMENT
C.
APPLICATION
6. Selection or Construction of the Instrument
Use of the Instrument
7. Collection of Information
Scoring and Compiling of Information
8. Establishment of Standards
Interpretation, Analysis, or Comparison
9. Possible Judgements
Judgements Made
10. (a) Identification of Possible Decisions/Actions
(b) Identification of the Consequences of Possible Decisions/Actions
(c) Choice of Decisions/Actions

Table 21 gives an overview of the interdependence of the elements that make up educational evaluation in its broadest sense.

## TABLE 21

## Educational Evaluation in the Decision-Making Process for the Physical Education Program

| 1. Time of Application | Before | | During | | After |
|---|---|---|---|---|---|
| | At the beginning of the sequence | | Periodically | As needed | At the end of the sequence |
| 2. Types of Decisions | EDUCATIONAL<br>To modify the organization and planning of teaching strategies | | EDUCATIONAL<br>To modify the organization and the strategies used (teacher)<br>To modify the way he learns (pupil) | | EDUCATIONAL<br>To modify planning of future sequences<br>ADMINISTRATIVE<br>To promote |
| 3. Aims of Evaluation | To evaluate prerequisite entry skills and knowledge | To evaluate the pupil's level of development in relation to the planned learning tasks<br>To obtain basic information | To follow pupils' progress towards achievement of the learning objective<br>To identify pupils who are experiencing difficulties<br>To detect learning difficulties | | To evaluate the learning achieved by the end of the learning unit |
| 4. Type and Purpose of Evaluation | Formative<br>Modification | Summative<br>Balance sheet of skills and knowledge already acquired | Periodic Formative<br>Modification | Diagnostic Formative<br>Modification | Summative<br>Balance sheet of learning achieved |
| 5. Focus of Evaluation | Concepts<br>Attitudes<br>Skills required to begin the sequence | Learning objectives | Learning objectives | Pupil's performance | Learning objectives |
| 6. Measurement Instrument | Selected sampling of questions on knowledge and attitudes, or tasks<br>to assess prerequisite skills | Evaluation tasks based on representative environmental variables<br>for the learning objectives | Evaluation tasks based on the set of environmental variables for<br>the learning objectives | Observation of the pupil's performance | Evaluation tasks based on representative environmental variables<br>for the learning objectives |
| Level of Difficulty | Easy | Average | Average | | Average |
| Application and Observation | .For the whole class<br>.Observation by classmates or the teacher | .For the whole class<br>.Observation by classmates or the teacher | .For the whole class<br>.Observation by classmates or the teacher | .For pupils having difficulty<br>.By the teacher, a classmate, or the pupil himself | .For the whole class<br>.Observation by classmates, the teacher, or an outside observer |
| 7. Collection of Information | .Answers or tasks performed by pupils<br>.Optional recording of results<br>.Appropriate method of observation | .Tasks performed by pupils<br>.Compulsory recording of results<br>.Appropriate method of observation | .Performance by pupils<br>.Optional recording of results<br>.Appropriate method of observation | .Performance by the pupil<br>.Optional recording of results<br>.Appropriate method of observation | .Performance by pupils<br>.Compulsory recording of results<br>.Appropriate method of observation |
| 8. Interpretation | Based on qualitative or quantitative norms | Analysis of information obtained | Comparison of information obtained with the results of the initial evaluation | Analysis of the pupil's performance | Analysis and comparison of information obtained with the results of the initial evaluation |
| 9. Judgement | As to whether pupils have achieved the prerequisite entry behaviours | | As to whether pupils are learning the desired behaviours or not | | As to whether the objectives have been achieved or not |
| 10. Decisions or Action | To make up the deficiencies the pupil may have in terms of prerequisite entry behaviours<br>To modify the learning situation | To create special small working groups<br>To modify the means of implementation | To help pupils to overcome any difficulties identified<br>To modify the means of implementation | To help the pupil find ways to improve his approach to learning<br>To offer helpful advice to the pupil<br>To modify the learning context | To modify future planning<br>To promote<br>To furnish information |

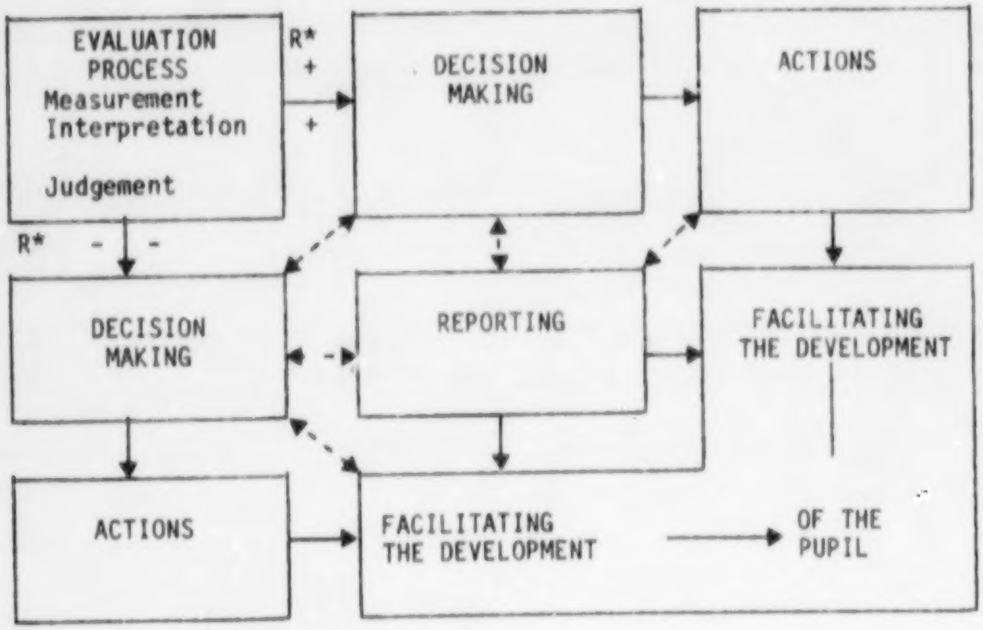
### 4.4 Reporting to Parents

Normally, the information furnished to parents is concerned with the judgements that have been made. Parents are usually informed about their children's progress at the end of a term. The information covers the subject matter taught in one or more sequences during the term.

Table 22 shows how reporting fits into the overall evaluation process and how it serves to facilitate pupils' development.

TABLE 22

**Reporting to Parents in the Context of Educational Evaluation**



EVALUATION PROCESS
Measurement
Interpretation
Judgement
R*
+
+
R*
-
-
DECISION MAKING
ACTIONS
DECISION MAKING
REPORTING
FACILITATING THE DEVELOPMENT
ACTIONS
FACILITATING THE DEVELOPMENT
OF THE PUPIL

R* Positive or Negative Result

To assist teachers, the guide presents a sample school report which can be adapted to meet the needs of teachers, parents, and the school, and to take into account the evaluation policy of the school board.

The sample report for physical education has a list of the themes which constitute the subject of study and work in this discipline. Obviously not all the themes will be covered each term. The themes or subjects of study should be arranged in the order in which they will be taught during the year. Parents will then know what is being evaluated from one term to another. There will usually be an assessment for each theme in the final report of the year, unless the decision was made to spread the themes to be taught over more than one year.

In keeping with the orientation of the Physical Education program, pupils' progress in attaining the objectives of the program should be evaluated and the results sent out to parents. The report may also serve as a progress report which will follow the pupils' development throughout his elementary school career. A sample report is shown on the following page.

EXAMPLE 10

## Physical Education School Report

Name of Pupil____________________

Year ____________________

| Themes | | TERM | | | | Teacher's Comments |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | |
| **Mobility** | Controlled movement of the body or body parts | | | | | |
| **Physical Exertion** | Cardiorespiratory stamina and muscular endurance | | | | | |
| **Locomotion** | Locomotor movement in different contexts | | | | | |
| **Object Manipulation** | Handling, projecting, and receiving different types of objects | | | | | |
| **Cooperation** | Cooperation with one or more partners | | | | | |
| **Opposition** | Counteracting or outmanoeuvering an opponent | | | | | |
| **Cooperation and Opposition** | Cooperation with partners against opponents | | | | | |
| **Expression** | Aesthetic forms and symbolic interpretations | | | | | |

Ratings
A. The pupil has shown significant improvement
B. The pupil has made usual progress
C. The pupil has experienced difficulties
D. Not enough information is available at this time

Signature____________________

| Pupil's Comments | Parent's Comments |
|---|---|
| | |

## 4.5 Observation Instruments

These instruments are devices used to record observations of pupil behaviours for evaluation purposes. Their effectiveness depends on how closely they are keyed to the learning objectives and whether the behaviours selected are readily observable and clearly defined.

Observation instruments are used to obtain information on a process or a product.

When they are used to evaluate a process, their purpose is to assess the method used to accomplish a given task. They are particularly effective in cases where the steps of the process may be clearly identified.

When they are used to evaluate a product, their purpose is to assess its characteristics. The product may be lasting (marks made by skates in figure skating, arrows in a target, etc.) or transitory (a jump, getting free of an opponent, achieving a goal, etc.). These instruments are used when it is possible to specify the characteristics of the product or when the process used to achieve the product is not visible to the observer.

The observation instruments selected for the Physical Education program are:

A. checklists
B. criterion - referenced checklists

### 4.5.1 The Checklist

The checklist is a valuable device for recording observed behaviour. It comprises a list of actions to be performed, methods to be used, or the characteristics of a given task which the pupil will carry out. To use it, the observer simply indicates whether the actions, methods, or characteristics are present or lacking (see Examples 1 and 2).

The checklist has many advantages. For the most part, it is a reliable instrument. It is easily prepared, simple to use, and the score can be totalled quickly.

The checklist is prepared by following these steps:

- Making sure the instrument is suitable for the intended purpose.
- Making up a list of anticipated actions or behaviours, or desired characteristics. When necessary, undesirable actions or characteristics should be included.
- Putting the actions or behaviours to be observed in the order in which they will appear, if necessary.
- Making sure that the instructions can be clearly understood by the observer.

**Example I: Checklist To Evaluate the Process**

| | |
|---|---|
| (a) Evaluation Criterion: | Carrying out offensive actions as a carrier in the defensive zone. |
| (b) Conditions of Performance: | In a 3 on 3 game situation, on half a basketball court, the team on defense takes possession of the ball thrown by the teacher against the backboard and takes the offense. |
| (c) Instructions to the Observer: | When the pupil being observed gains possession of the object in his defensive zone, record each of the actions he executes by placing a ✓ in the appropriate box when he succeeds and an 0 when he fails. Do not write anything in the boxes beside the actions that have not been executed. Each time the pupil regains possession of the object in the half of the playing area that he is defending, move to the next column. Observe at least three performances. |
| (d) Observation Instrument Used: | Checklist. |

In the half of the playing area that he is defending, the pupil takes possession of the object and he:

| | | PERFORMANCES | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | 1 | 2 | 3 | 4 | 5 |
| 1. turns toward the opponents' goal | 1. | ✓ | ✓ | | ✓ | ✓ |
| 2. checks the position of his partners | 2. | ✓ | ✓ | | | ✓ |
| 3. passes the object to a partner who is free | 3. | O | | | ✓ | |
| 4. or takes the object to the centre of the playing area | 4. | | ✓ | ✓ | | ✓ |
| 5. rechecks the position of his partners | 5. | | ✓ | ✓ | | ✓ |
| 6. passes the object to a partner who is free | 6. | | O | ✓ | | |
| 7. or gives a signal | 7. | | | | | ✓ |
| 8. passes the object to a partner who is free | 8. | | | | | O |

**EXAMPLE 2: Checklist for Evaluating the Product**

| | | |
|---|---|---|
| (a) | Evaluation Criterion: | Maintaining static balance while holding a position (extended handstand). |
| (b) | Conditions of Performance: | The pupil takes the position and holds it for a minimum of three to a maximum of five seconds. The pupil does this five times. |
| (c) | Instructions for the Observer: | Check off the characteristics of each execution. A handstand is considered to have been executed when the legs, aligned with the rest of the body, form an angle of approximately 160 degrees. |
| (d) | Instrument Used: | Checklist. |

During the performance of the movement, the pupil has:

| | PERFORMANCES | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| - toes extended | ✓ | ✓ | ✓ | ✓ | ✓ |
| - legs fully extended | ✓ | ✓ | ✓ | ✓ | ✓ |
| - arms fully extended | | ✓ | ✓ | ✓ | |
| - feet, shoulders, and hands aligned | ✓ | ✓ | | ✓ | ✓ |
| - achieved a stable position | ✓ | ✓ | ✓ | | ✓ |
| - maintained position for the required length of time | | | ✓ | | ✓ |

### 4.5.2 Criterion-Referenced Checklist

The criterion-referenced checklist covers a number of actions, behaviours, or characteristics related to a process or a product which can be graded on a rating scale. Each of the ratings on the scale may be identified by an error in a particular performance. This type of checklist allows the observer to record the pupil's behaviour in a given task by checking off a description which constitutes one of the ratings on the scale.

The procedure for making up a criterion-referenced checklist comprises the following steps:

1. Identify clearly the focus of evaluation. A precise definition of the criteria or characteristics to be evaluated is very important here.

   Example: Evaluation criterion: receiving a ball
   Observable indicator: taking possession of the ball.

2. Define the optimum level of performance in terms of behaviours, and observable and sequential actions. This description is the top rating on the scale. Descriptions should be clear and precise, free of subjective and vague terms such as, well, often, etc.

   Example 1: The pupil receives the object and maintains direct contact with it.

3. Define the lowest rating on the scale which represents the worst possible performance of the task. This description should follow the rules set down in Step 2.

Example 5: The pupil does not make contact with the object.

4. Make up a series of ratings that fall between the two extremes of the scale. These descriptions can include the errors most commonly associated with the performance of a given task. It is recommended that scales should include between 3 and 7 levels. The middle rating descriptions should also follow the rules set down in Step 2.

Example 2. The pupil receives the object, fumbles with it, and takes possession of it by maintaining direct contact with it.

3. The pupil receives the object, fumbles with it, but fails to take possession of it.

4. The pupil makes contact with the object, but fails to take possession of it.

5. Assign a code for each rating on the scale to facilitate the recording of the observed behaviour.

6. Give clear instructions on how to record observations.

The following example of a criterion-referenced checklist is simple to use and does not require any special skill. The observer records, beside the pupil's name, the code for the rating which corresponds to his performance of a task.

## EXAMPLE 4: Criterion-Referenced Checklist

(a) Evaluation criterion: Receiving an object.

(b) Conditions of performance: The thrower and receiver stand about three metres apart. When they are ready, the thrower throws a ball directly to the receiver, who catches it, and throws it back to his partner, who catches it. Pupils should perform this task for two minutes.

(c) Instructions for the observer: Observe the pupil and record at least three executions, not necessarily consecutive ones. For each execution, record the code that most closely corresponds to the observed behaviour.

(d) Observation instrument used: Criterion-referenced checklist.

| Code | Observable Behaviours |
|---|---|
| 1 | The pupil receives the object and maintains direct contact with it. |
| 2 | The pupil receives the object, fumbles with it, and takes possession of it by maintaining direct contact with it. |
| 3 | The pupil receives the object, fumbles with it, but fails to take possession of it. |
| 4 | The pupil makes contact with the object. |

| Code | Observable Behaviours |
|---|---|
| 5 | The pupil fails to make contact with the object. |

| Names \ Performance | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| David | 2 | 2 | 3 | 3 | 4 |
| Mary | 4 | 4 | 3 | 4 | |
| Bruno | 3 | 2 | 2 | | |

Teachers may use the sample observation instruments as models from which to make up others to suit their own needs. They may also use the Formative Evaluation Guide prepared by the Direction de l'évaluation pédagogique which contains examples for each of the phases of the learning sequence and of the evaluation process.

Much work remains to be done in developing this new approach to evaluation and it will be through the individual efforts of each teacher that a new physical education evaluation process will evolve.

## CHAPTER 5

## 5.0 ASSESSMENT OF THE IMPLEMENTATION OF THE PROGRAM

## CHAPTER 5

## 5.0 ASSESSMENT OF THE IMPLEMENTATION OF THE PROGRAM

The new program has not yet been tried out in the schools and consequently it remains a working hypothesis to be confirmed. The same holds true for the educational planning, which serves as a reference point for preparing and implementing the program.

The so-called "assessment of the implementation of the program" phase involves a comparison of what was envisaged with what actually took place. The teacher or a group of teachers in a school or school board have all the information needed to make this assessment.

The purpose of this assessment is to enable teachers to revise their strategies and to make any changes needed to improve the learning sequence.

The reason for making this assessment will dictate whether it is made by the teacher, a group of teachers, the school administration, or the school board.

### Periods of Teaching Which May Be Assessed

1. Class period
2. Learning sequence
3. Term
4. School year
5. Cycle

### 5.1 Assessment of the Class Period

The teacher is responsible for assessing each class period. The purpose of this assessment is to enable the teacher to modify his teaching strategies on the basis of his observations, the group's progress, and any other factor which might serve to improve subsequent periods.

Teachers may use the following questions as indicators on which to base their assessment:

- Are the results achieved by the pupils such that I can go on to the next step in my plan for the sequence?

- Have the phases in the teaching/learning process been followed?

- Are the learning tasks and situations appropriate? Do they need to be modified?

- Am I satisfied with the organization of the group? Does it allow all the pupils to participate fully? Does the equipment organization need to be modified?

- Is all of the equipment being put to use?

- Are there any pupils who need extra help?

- How satisfied were the pupils with the class period?

- ...

On the basis of the responses to these questions, the teacher can make different decisions and take steps to improve the next class period(s) in the learning sequence.

### 5.2 Assessment of the Sequence

This assessment should cover the period of time taken to teach a theme or subjects of study. It is primarily the teacher's responsibility to carry out this assessment so that he can prepare a profile of the learning achieved by pupils and, at the same time, evaluate the planning and conduct of the learning sequence.

The teacher may use the following questions:

- Have all the pupils achieved a satisfactory level of learning?
- Do I need to modify the evaluation situations or tasks, or alter their level of difficulty?
- Do I need to modify the learning situations as to their duration, the tasks involved, or the process used?
- Does the class organization facilitate attainment of the objectives being pursued?
- Was sufficient time devoted to this sequence? Was it long enough to allow for sufficient learning to take place? Are there other dimensions of the subject of study that I might have covered?

- Are there any changes I should make concerning the resources used?
- Are the evaluation instruments useful and adequate? How can I improve them? Do they provide the information I want?
- Have I followed the phases in the teaching/learning process?
- How satisfied were the pupils with the overall learning sequence?
- How much satisfaction did I feel?
- ...

The teacher can use the responses to questions of this kind to find out how he can modify the sequence and can share with the other teachers what he learns from the answers.

### 5.3 Assessment of the Term

This assessment covers the planning of the learning content or terminal objectives selected to be taught during the term. The teacher or a group of teachers within the school, with or without the help of the administration, may carry out this assessment.

The following questions may be used:

- Was the order in which the learning sequences were presented satisfactory?
- Was there sufficient time during the term to teach the learning sequences properly?
- Are there more advantages or disadvantages involved in planning work by the term? Is it worthwhile?
- Is annual planning of the work to be covered each term important in physical education?
- ...

Teachers can use the responses to these questions in making up their recommendations to the school administration.

## 5.4 Assessment of the School Year

The purpose of this assessment is to evaluate both the distribution of the learning content or terminal objectives over the year and the time allotted to them. The teacher or a group of teachers in a school are responsible for making this assessment.

The following questions may be used:

- How well did the distribution of the learning content serve the learning process? Should it be modified?
- Should the order in which the learning objectives were presented be changed?
- Should any changes be made in the time allotted to each learning sequence?
- Should the learning content for the next school year be reduced or enriched?
- Is there a need for professional development? If so, in which areas?
- Were the available resources adequate?
- How satisfied were the pupils and teachers with the learning and teaching that took place during the year?
- ...

This assessment should enable the teacher or group of teachers to modify the annual planning and make recommendations on the issues in question.

### 5.5 Assessment of the Cycle

At this level, the assessment should be carried out by the group of teachers who are responsible for teaching the cycle, working with the head of the department and the physical education consultant of the school board. The purpose of the assessment is to review and revise the organization of learning content for each school year.

The group should review the reasons behind the choices made with regard to the distribution of the content for each year and they should also review, on the basis of the teachers' practical experience in implementing the program, the amount of time allotted to each of the movement contexts, themes, and subjects of study. It should be remembered that the preliminary planning of the program is only a working hypothesis to be tested. This is a good time to discuss future enrichment of the program. The group should also take into consideration the degree of satisfaction that pupils, as well as teachers, experienced during the year.

When this assessment is completed, changes in the organization of the program content to meet the needs of pupils should be made, in keeping with the particular school situation.

Table 23 gives a summary of the different assessments covered in this chapter.

## TABLE 23

## SUMMARY OF ASSESSMENTS

| FOCUS OF ASSESSMENT | PURPOSE | PERSON RESPONSIBLE | CRITERIA | MEANS |
|---|---|---|---|---|
| 1. Class Period | Revision | Teacher | - pupils' results<br>- teaching/learning process<br>- learning situations<br>- class organization<br>- use of resources<br>- evaluation instruments<br>- pupils' satisfaction<br>- ... | Personal effort by the teacher based on his observations, the evaluation instruments, and pupils' comments. |
| 2. Learning Sequence | Information<br>Revision | Teacher<br>Teacher | - level of development reached<br>- evaluation situations<br>- learning situations<br>- class organization<br>- relative importance of the unit<br>- use of resources<br>- the teaching/learning process<br>- evaluation instruments<br>- pupils' and teachers' level of satisfaction | Personal effort by the teacher based on the sequence plan, the evaluation instruments, his own observations, and pupils' comments. |
| 3. Term<br>4. Year<br>5. Cycle | Revision and Information | Teacher or group of teachers teaching the same cycle, working with heads of department and consultants | - order in which sequences are taught<br>- distribution of sequences over the year<br>- relative importance of the learning sequences<br>- resources (human, material, physical financial, organizational)<br>- pupils' level of satisfaction<br>- teachers' level of satisfaction | Personal or group effort based on evaluation of the learning sequences. |

## Conclusion

On first reading, the ideas expounded in this guide may seem rather utopian to the physical education teacher who is about to teach the new program for the first time and who is entrusted with the responsibility for seeing that the requirements for the new curriculum are met. The development of a more structured and pupil-oriented approach to teaching requires so much knowledge and commitment on the part of the teacher that he cannot be expected to do it without help and support. It is, therefore, essential that all those involved in physical education work together to implement the new programs in a spirit of cooperation, tolerance, and openness to change.

The overall effectiveness of the program will depend upon all the individual efforts made to improve it. This guide invites all physical educators to make their own personal contribution toward achievement of the main goal of the program, which is to provide the pupil with an education that meets both his own needs and the expectations of our society, that respects the pupil's individuality in all its dimensions, and that promotes his personal growth and development.

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# APPENDIX I

## DOMAINS OF THE THEMES AND SUBJECTS OF STUDY OF THE ELEMENTARY SCHOOL PHYSICAL EDUCATION PROGRAM

# 1. DEFINITIONS

## 1.1 To specify a domain

This involves identifying and organizing variables which are appropriate for the skill in question.

## 1.2 The domain of a skill

This includes all the possible learning contexts (dimensions) designed to enable the learner to exhibit the desired behaviours (actions) for the skill in question.

## 1.3 Dimension of a domain

This is a part of a domain made up by putting together a number of environmental variables.

## 1.4 Environmental variables

There are, in general, six universal environmental variables: body, space, time, energy, object, person. These variables may be further specified as follows:

| | |
|---|---|
| Body | - body part<br>- whole body<br>- ... |
| Space | - levels<br>- playing area<br>- playing surface<br>- surface (snow, ice, water)<br>- ... |

Time
- length
- moment
- ...

Object
- support
- tool
- obstacle
- fixed
- ...

Person
- partner
- opponent
- spectator
- sender
- receiver
- ...

## 2. PROCEDURE FOR SPECIFYING THE DOMAIN OF A SKILL

This procedure may be used for skills of every type and level of difficulty:

1. Identify the environmental variables related to the practice of the skill in question.

2. Select the sub-element(s) of the variables identified in 1.

3. Organize the sub-elements to form a matrix.

4. Number the possible dimensions formed by the matrix: the numbering should follow the order of complexity desired.

5. The domain of the skill is now specified.

**Domain 1**
Theme: Mobility
Subject of Study: Movement of different parts of the body

| | Involving only one movement | Involving 2 identical or different movements | | Involving more than 2 movements | |
|---|---|---|---|---|---|
| | | Coordinated | Separate | Coordinated | Separate |
| Single plane | 1 | 2 | 3 | 4 | 5 |
| Variable planes | 6 | 7 | 8 | 9 | 10 |

**Domain 2**
Theme: Mobility
Subject of Study: Body positions

| | | With fixed support points | | With a change in support points |
|---|---|---|---|---|
| | | Without moving from center of gravity (static) | Moving from center of gravity (dynamic) | |
| On a large surface limited by his personal space | On more than one support point | 1 | 2 | 3 |
| | On one support point | 4 | 5 | 6 |
| On a limited surface situated inside his personal space | On more than one support point | 7 | 8 | 9 |
| | On one support point | 10 | 11 | 12 |

**Domain 3**
Theme: Mobility
Subject of Study: Actions connected with the:

(a) Use of space

| | Uniform level (high, low, medium) | | Variable level (high, low, medium) | |
|---|---|---|---|---|
| | Single direction (front, back, side) | Variable directions (front, back, side) | Single direction (front, back, side) | Variable directions (front, back, side) |
| With one part of the body | 1 | 2 | 3 | 4 |
| With the whole body | 5 | 6 | 7 | 8 |

(b) Execution time

| | Regular speed of execution | | Variable speed of execution | |
|---|---|---|---|---|
| | Without rhythmic support | With rhythmic support | Without rhythmic support | With rhythmic support |
| With one part of the body | 1 | 2 | 3 | 4 |
| With the whole body | 5 | 6 | 7 | 8 |

(c) Demands for energy

| | During Muscle Contraction | During Relaxation |
|---|---|---|
| With one part of the body | 1 | 2 |
| With the whole body | 3 | 4 |

**Domain 4**
Theme: Physical effort
Subject of Study: Cardio-respiratory stamina

| | | Intensity of Effort | | |
|---|---|---|---|---|
| | | Low | Average | High |
| Length of Effort | Short | 1 | 2 | 3 |
| | Average | 4 | 5 | 6 |
| | Prolonged | 7 | 8 | 9 |

**Domain 5**
Theme: Physical effort
Subject of Study: Muscular stamina

| | | Specific Workout | | General Workout | |
|---|---|---|---|---|---|
| | | Without weight | With a small weight | Without weight | With a small weight |
| Uniform Intensity | Short Duration | 1 | 2 | 3 | 4 |
| | Average Duration | 5 | 6 | 7 | 8 |
| | Prolonged Duration | 9 | 10 | 11 | 12 |
| Variable Intensity | Short Duration | 13 | 14 | 15 | 16 |
| | Average Duration | 17 | 18 | 19 | 20 |
| | Prolonged Duration | 21 | 22 | 23 | 24 |

**Domain 6**
Theme: Locomotion
Subject of Study: Locomotor movement in relation to different types of space

(a) adapting to different surfaces

| | Ground (earth, snow, ice, water) | | | |
|---|---|---|---|---|
| | Without obstacles | | With fixed or moving obstacles | |
| | Flat surface | Slope | Flat surface | Slope |
| Free course | 1 | 2 | 3 | 4 |
| Set course | 5 | 6 | 7 | 8 |
| Free course | 9 | 10 | 11 | 12 |
| Set course | 13 | 14 | 15 | 16 |

Movements that do not involve moving objects can be executed on different supports and in different directions.

(b) adapting to space

| | | Free Space | | Occupied Space | |
|---|---|---|---|---|---|
| | | Without markings | With markings | Without markings | With markings |
| Free Movement | Vertical Position | 1 | 2 | 3 | 4 |
| | Variable Position | 5 | 6 | 7 | 8 |
| Movement following set patterns | Alone | 9 | 10 | 11 | 12 |
| | With a group | 13 | 14 | 15 | 16 |

**Domain 7**
Theme: Locomotion
Subject of Study: Locomotor movement in relation to various types of objects

| | | On the ground | | On or with the help of apparatus | | Suspended or supported in the air | |
|---|---|---|---|---|---|---|---|
| | | Without obstacles | With obstacles | Without obstacles | With obstacles | Without obstacles | With obstacles |
| With continuous supports or holds | Free course | 1 | 2 | 3 | 4 | 5 | 6 |
| | Set course | 7 | 8 | 9 | 10 | 11 | 12 |
| With intermittent supports or holds | Free course | 13 | 14 | 15 | 16 | 17 | 18 |
| | Set course | 19 | 20 | 21 | 22 | 23 | 24 |

**Domain 8**
Theme: Object manipulation
Subject of Study: Handling objects

| | | With constant contact | With intermittent contact |
|---|---|---|---|
| With a part of the body | Stationary | 1 | 3 |
| | Moving | 2 | 4 |
| With a tool | Stationary | 5 | 7 |
| | Moving | 6 | 8 |

**Domain 9**
Theme: Object manipulation
Subject of Study: Propelling for distance

| | | Held or intercepted object | Moving object |
|---|---|---|---|
| With a part of the body | Stationary | 1 | 3 |
| | Moving | 2 | 4 |
| With a tool | Stationary | 5 | 6 |
| | Moving | 7 | 8 |

Subject of Study: Propelling for accuracy

| | | Fixed target | | Moving target | |
|---|---|---|---|---|---|
| | | Fixed object | Moving object | Fixed object | Moving object |
| With a part of the body | Stationary | 1 | 3 | 5 | 7 |
| | Moving | 2 | 4 | 6 | 8 |
| With a tool | Stationary | 9 | 11 | 13 | 15 |
| | Moving | 10 | 12 | 14 | 16 |

**Domain 10**
Theme: Object manipulation
Subject of Study: Receiving

| | | An object projected by him | An object projected by a partner |
|---|---|---|---|
| With a part of the body | Stationary | 1 | 2 |
| | Moving | 2 | 4 |
| With a tool | Stationary | 5 | 7 |
| | Moving | 6 | 8 |

**Domain 11**
Theme: Cooperation
Subject of Study: Assisting in the action of another and cooperating with one or several partners

| | | Identical Roles | | Different Roles | |
|---|---|---|---|---|---|
| | | Without an object or tool | With an object or tool | Without an object or tool | With an object or tool |
| In pairs | Without direct physical contact | 1 | 2 | 3 | 4 |
| | With direct physical contact | 6 | 6 | 7 | 8 |
| In a group | Without direct physical contact | 9 | 10 | 11 | 12 |
| | With direct physical contact | 13 | 14 | 15 | 16 |

**Domain 12**
Theme: Opposition
Subject of Study:
- Individual offensive actions
- Individual defensive actions
- Competition

| | | Common Territory | | Different Territory | |
|---|---|---|---|---|---|
| | | Without a time limit | With a time limit | Without a time limit | With a time limit |
| Without contact with opponents | With an object | 1 | 2 | 3 | 4 |
| | Without an object | 5 | 6 | 7 | 8 |
| With indirect contact with opponents | Without an object to struggle against | 9 | 10 | 11 | 12 |
| | With an object to struggle against | 13 | 14 | 15 | 16 |
| With direct contact with opponents | Without an object to struggle against | 17 | 18 | 19 | 20 |
| | With an object to struggle against | 21 | 22 | 23 | 24 |

The actions linked to opposition can be executed on different surfaces, including an elevated position above ground.

**Domain 13**

Theme: Cooperation and Opposition

Subjects of Study:

(a) Cooperation motor skills:
- occupying space
- progression of the object
- shots in optimal conditions
- retrieving the object

(b) Opposition motor skills:
- protecting territory
- intercepting the object
- anticipating the shot
- retrieving the object

(c) Carrier motor skills:
- protecting the object
- progression of the object
- shots in optimal conditions

(d) Non-carrier motor skills:
- occupying optimal space
- protecting territory
- intercepting the object
- retrieving the object

| | | Comparative abilities - team members and opponents | | |
|---|---|---|---|---|
| | | Inferior | Equal | Superior |
| Same playing area | Offensive phase | 1 | 2 | 3 |
| | Defensive phase | 4 | 5 | 6 |
| Different playing areas | Offensive phase | 7 | 8 | 9 |
| | Defensive phase | 10 | 11 | 12 |

**Domain 14**
Theme: Expression
Subjects of Study: Expression of ideas and feelings
Representation of real and imaginary happenings

| | | Without sound support | | With sound support | |
|---|---|---|---|---|---|
| | | Without spectators | With spectators | Without spectators | With spectators |
| Solo | | 1 | 2 | 3 | 4 |
| In pairs | In harmony | 5 | 6 | 7 | 8 |
| | In contrasting relationship | 9 | 10 | 11 | 12 |
| | In mirror relationship | 13 | 14 | 15 | 16 |
| In small groups | In harmony | 17 | 18 | 19 | 20 |
| | Alternatively | 21 | 22 | 23 | 24 |